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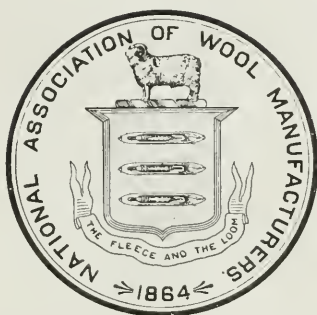






BULLETIN  
OF THE  
NATIONAL ASSOCIATION  
OF WOOL MANUFACTURERS

1921



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EDITED BY PAUL T. CHERINGTON, Secretary

Assisted by

JOHN BRUCE McPHERSON

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**BULLETIN**  
OF THE  
**National Association of Wool Manufacturers**  
A QUARTERLY MAGAZINE  
DEVOTED TO THE INTERESTS OF THE NATIONAL WOOL INDUSTRY.

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VOL. LI.]

BOSTON, JANUARY, 1921.

[No. I.

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**A PLAN FOR EQUALIZING CHANGES IN TARIFF  
DUTIES DUE TO FLUCTUATIONS IN EXCHANGE.**

THE following is the statement concerning the plan for equalizing changes in tariff duties resulting from fluctuations in exchange, submitted December 9, 1920, to the Committee on Ways and Means of the House of Representatives by a committee of the National Association of Wool Manufacturers, consisting of Mr. Franklin W. Hobbs, Chairman, and Messrs. Jacob F. Brown and Paul T. Cherington. This committee had been instructed by the Executive Committee of the Association to put the plan before members of Congress likely to be interested. A special session of the Committee on Ways and Means was called, at which the statement was presented.

When the Underwood-Simmons law was enacted, all nations were on a gold basis. At the present time, with the exception of the United States and Japan, all nations are on a paper basis, and some are on a printing press basis.

The United States import tariff is built on the assumption that exchange conditions with the chief trading countries will remain comparatively stable. Neither by law nor by regulation are the present unstable conditions adequately provided for. The currency of some countries is now almost worthless in American money, and that of even such important commercial countries as England and France shows marked depreciation. There is no ground for expectation that normal or even steady rates of exchange will be restored for several years.

The plan proposed herewith is designed to restore purchases in foreign money to the same relative value in American

dollars that they had in 1914. The two parts of the plan are as follows:

1. The present regulations by which duties are assessed on the basis of the foreign purchase values in depreciated currencies should be rescinded, and all duties provided in the present tariff schedule should be collected on the basis of the foreign cost of normal rates of exchange, or if the foreign invoice is in United States money, the difference between the current rate of exchange of the country of origin at the time of purchase and the normal rate of exchange should be added to the invoice, and the duty collected on the total. In this way there would be restored the amount of duties intended to be collected under the present tariff law.

2. In order to correct the present alarming possibilities for dumping huge quantities of raw and manufactured products from countries with depressed currencies, it is proposed that in the case of all foreign purchases, whether dutiable or not, the Federal Government shall collect in the form of an equalizing charge on all imports, in addition to any duties provided by the tariff law, the difference between the amount paid the foreign seller figured at the current rates of exchange and the same amount figured at the normal rate of exchange. The equalizing charge thus provided for might be limited to, say, thirty per cent of the foreign value of the merchandise at par of exchange.

Under the present distressing conditions of business in this country, with the increasing amount of imports now coming in, and with the impossibility of tariff revision before the elapse of many months, some immediate action is imperative in order to save certain industries from destruction. Some emergency legislation should be passed immediately, and we believe the suggestions made offer more general and more certain relief than any other plan thus far proposed.

We also call your attention to the fact that in the making of any tariff bill for protection of American producers, or to prevent the dumping of foreign goods into the American markets, the current rates of exchange of the different countries will have to be considered. Otherwise the tariff bill would have its effectiveness impaired by every important change in the value of foreign currencies.

Concrete examples of the operation of the plan are given as follows:



## 1. PURCHASE OF MDSE. IN ENGLAND DUTY FREE.

Current exchange £3.49.

Normal exchange £4.8665.

<i>Cost under prevailing system.</i>		<i>Cost under proposed plan.</i>	
Purchase of mdse. in England amounting to £1,000, exchange at 3.49	\$3,490.00	Purchase of mdse. in England amounting to £1,000	\$3,490.00
Duty	None	Charge necessary to bring value of exchange to par	1,376.50
Cost of mdse. to American purchaser	\$3,490.00	Cost of mdse. to American purchaser	\$4,866.50

The equalizing charge in this case is equivalent to a duty of 39.44 per cent ad valorem.

## 2. PURCHASE OF MDSE. IN ENGLAND DUTIABLE AT 35%.

<i>Cost under prevailing system.</i>		<i>Cost under proposed plan.</i>	
Purchase of mdse. in England amounting to £1,000, exchange at 3.49	\$3,490.00	Purchase of mdse. in England amounting to £1,000 at current exchange	\$3,490.00
Duty 35%	1,221.50	Charge necessary to bring value of exchange to par	1,376.50
Cost of mdse. to American purchaser	\$4,711.50	Value at par of exchange	\$4,866.50
		Duty 35%	1,703.27
		Cost of mdse. to American purchaser	\$6,569.77

The equalizing charge and duty in this case are equivalent to 88.24 per cent ad valorem.

## 3. PURCHASE OF MDSE. IN FRANCE DUTIABLE AT 35%.

<i>Cost under prevailing system.</i>		<i>Cost under proposed plan.</i>	
Purchase amounting to 10,000 francs exchange at 6 cents	\$600.00	Purchase amounting to 10,000 francs at current exchange	\$600.00
Duty 35%	210.00	Charge necessary to bring value of exchange to par	1,330.00
Cost of mdse. to American purchaser	\$810.00	Value at par of exchange	\$1,930.00
		Duty 35%	675.50
		Cost of mdse. to American purchaser	\$2,605.50

The equalizing charge and duty in this case are equivalent to 334.25 per cent ad valorem.

## 4. PURCHASE OF MDSE. IN GERMANY DUTIABLE AT 35%.

<i>Cost under prevailing system.</i>		<i>Cost under proposed plan.</i>	
Purchase amounting to 10,000 marks, exchange at 1.50 cents	\$150.00	Purchase amounting to 10,000 marks at current exchange	\$150.00
Duty 35%	52.50	Charge necessary to bring value of exchange to par	2,230.00
Cost of mdse. to American purchaser	\$202.50	Value at par of exchange	\$2,380.00
		Duty 35%	833.00
		Cost of mdse. to American purchaser	\$3,213.00

The equalizing charge and duty in this case are equivalent to 2042 per cent ad valorem.

NOTE.—The equalizing charge should not in any case exceed 30 per cent of the invoice at the normal rate of exchange.

## WAGES.

Based on current rates of exchange, wages in the United States now are three times wages in England, six to seven times wages in France, and thirteen to fourteen times wages in Germany.

## EXCHANGE.

From February to December the pound sterling (par 4.8665) fluctuated from \$3.19 to \$4.07. Present quotation, \$3.44. The French franc (par 19.3 cents) from 8.62c to 5.70c.; present quotation, 5.86c. German mark (par 23.8c.) from 4 cents to 1 cent; now, 1.32 cents.

EXAMPLES NO. 3 AND NO. 4 AS ABOVE WITH A LIMIT OF 30% ON THE EQUALIZING CHARGE AS SUGGESTED.

## NO. 3 WITH MAXIMUM CHARGE 30% APPLIED.

<i>Cost under proposed plan.</i>		
Purchase amounting to 10,000 francs at current exchange		\$600.00
Par of exchange	\$1,930.00	
30% is	579.00	579.00
Duty 35% on \$1,930.00		675.50
Cost of mdse. to American purchaser		\$1,854.50

Equalizing charge and duty are equivalent to 209% ad valorem.

## No. 4 WITH MAXIMUM CHARGE OF 30% APPLIED.

*Cost under proposed plan.*

Purchase amounting to		
10,000 marks at current exchange		\$150.00
Par of exchange	\$2,380.00	
30% is	714.00	714.00
Duty 35% on \$2,380.00		833.00
		<hr/>
Cost of mdse. to American purchaser		\$1,697.00

The equalizing charge and duty are equivalent to 1,031.33% ad valorem.

The following excerpts are taken from the stenographic report of the testimony offered by the three members of the committee. Mr. Franklin W. Hobbs, President of the Arlington Mills, was the first witness called. After submitting the printed statement for the record, Mr. Hobbs was asked many questions by members of the committee, some of which with his answers were:

STATEMENT OF MR. FRANKLIN W. HOBBS, PRESIDENT OF THE  
ARLINGTON MILLS, LAWRENCE, MASS.

MR. HAWLEY. You propose to add to the invoice as given in England a sufficient amount to bring it up to the gold value of the pound.

MR. HOBBS. That is the idea.

MR. HAWLEY. And then in the other instances, on page 3, before you attach the duty, you add to the invoice rendered in England or in any other foreign country?

MR. HOBBS. Yes, sir.

MR. HAWLEY. You add to the invoice rendered in such country a sufficient amount to bring the base of the invoice up to the gold value of the pound, mark, or franc?

MR. HOBBS. That is right.

MR. HAWLEY. And then levy the duty upon that?

MR. HOBBS. Then levy the duty on the standard value, not on the depreciated value, varying with every country.

MR. GREEN. Would not that give England a tremendous advantage to begin with over countries whose exchange is much more depreciated?

MR. HOBBS. The other countries now have a tremendous advantage over England, as long as you mention England.

MR. GREEN. Our imports from those countries are very much more than those from England.

MR. HOBBS. That is due to internal conditions, which we think will rectify themselves, but having that point in mind we have suggested here that in no case this special levy should exceed 30 per cent of the value.

MR. HAWLEY. Of the difference between.

MR. HOBBS. That the difference between it and this special levy should not exceed 30 per cent of the normal value of the invoice.

MR. TREADWAY. What do you mean by normal?

Mr. HOBBS. Gold basis.

Mr. HAWLEY. For instance, you take the invoice rendered in pounds sterling?

Mr. HOBBS. Yes, sir.

Mr. HAWLEY. And you take the depreciated currency value there?

Mr. HOBBS. Yes, sir.

Mr. HAWLEY. Then subtract that from the gold value of the pound and take 30 per cent of the difference?

Mr. HOBBS. No; take 30 per cent of the value at the par of exchange on the gold value and then whatever this amount should be should not exceed 30 per cent of the gold value of what should be the invoice.

For instance, take the illustration on page 3 of my memorandum; I can explain that on the cost under the proposed plan of 1,000 pounds sterling. Purchase of merchandise from England, in illustration 2, amounting to 1,000 pounds sterling, exchange at \$3.49, making \$3,490. The charge necessary to bring the value of the exchange to par is \$1,376.50, making the value at par of gold exchange \$4,866.50.

Now, our point is that this \$1,376.50 in this particular case should never exceed 30 per cent of the par value of the invoice or par of exchange. In this case it is less than 30 per cent.

Mr. HAWLEY. Then you would not bring that to the value of the gold pound?

Mr. HOBBS. It would in that case cross 30 per cent, or fourteen hundred and some dollars. In the case of France, in the next illustration, the amount necessary there to bring it to par, to the \$1,330, against the \$600 depreciated value, we would so measure that that it would not be over 30 per cent of the \$1,930.

The CHAIRMAN. If I may interrupt for information, your figures on page 3, or wherever you have given these illustrations of comparisons, are based on the ad valorem?

Mr. HOBBS. Yes, sir.

The CHAIRMAN. What difference would it make, if any, if that was a specific duty? It would have to be figured on the ad valorem basis, whatever that specific amounted to; any ad valorem would be based upon your figures here.

Mr. HOBBS. Where the duty was specific I do not think the duty should be changed, but bringing the par value of the invoice up to par would be the same.

The CHAIRMAN. The duty specific would be on the quantity and not upon the value.

Mr. HOBBS. It would not affect the duty but it would be an equalizing charge to bring the value up to what it cost the American producer on the gold basis to produce against the foreign producer to produce on the depreciated basis.

The CHAIRMAN. It would not affect the specific duties at all?

Mr. HOBBS. No, sir; not as regards duty.

The CHAIRMAN. A ton of hay from Canada pays \$2 a ton. This plan if enacted into law would not affect that rate?

Mr. HOBBS. It would not affect the \$2, but it would put an equivalent of an additional duty of about 15 per cent on hay on account of the depreciated value of the Canadian dollar. The second part of the proposition would automatically put on a duty.

The CHAIRMAN. In that way it would raise specific duties because it would include also an ad valorem.

Mr. HOBBS. It would raise the total duty. It would not change the specific duty but it would automatically affect the total.

The CHAIRMAN. Suppose a ton of hay was brought into this country and sold at \$10. The duty on that is \$2 a ton. If their depreciated currency over there was 50 per cent and that hay was brought in at \$5, we would add 30 per cent or \$1.50, making a total of \$3.50 duty on the ton of hay.

Mr. HOBBS. I think that is right.

Mr. GREEN. Have you considered any other plan for rectifying this apparent difficulty that we have now? For example, levying a uniform rate, providing that in all cases the duty should not be less a certain specific amount, which, of course, would be paid in American money. Then all goods would pay the same amount from each nation. Under this plan they all would pay different amounts on the same kinds and qualities of goods.

Mr. HOBBS. Of course, there is that question about different amounts, but after all what we had in mind and what has seemed to be the real intent was to put the American producer on a parity. We are not worrying so much about the disadvantage of any foreign nation, but we wanted to put the American producer on a parity with all nations, and the only way you can do that is to have those whose credit is bad pay the penalty, not upon our markets, and practically putting a premium on imports from nations whose credit is poor as against the American producer.

Mr. GREEN. I do not think you mean that literally, that you were not worrying about other countries. You, of course, remember that they may enact discriminating duties as well as we can, and we are exporting large amounts now, and we do not want our exports cut off.

Mr. HOBBS. Not at all. That is quite right; but at the present moment we are discriminating to allow this condition to exist as against this condition here with the German mark at the prevailing rate to day, it having gone down over 10 per cent since we figured this. It would take a duty to bring the German imports to a fair basis with the American producer of over 2,000 per cent as against the eighty-odd per cent in England.

The CHAIRMAN. In other words, Mr. Hobbs, under existing conditions, we are collecting from Great Britain but two-thirds of the duties that we should collect, as provided by law or as the law intends?

Mr. HOBBS. Yes, sir.

The CHAIRMAN. In other words, we are collecting from Great Britain six hundred and sixty-six one-thousandths of what we would be entitled to collect, while from Germany we are only collecting one two-thousandth part of what we are entitled to. Is that right?

Mr. HOBBS. I think it is; one two-thousandth part. In order to bring it up to an equality with other countries, they should pay 2,000 as against 88, to bring it to the same relative basis as the American producer.

Mr. TREADWAY. Thirty per cent will not bring it up. You are suggesting limiting it to 30 per cent.

Mr. HOBBS. It is startling, the situation that confronts the American industries on this particular point. We only suggest this 30 per cent as about what it now takes on English exchange. Then the advantage would lie with all the other nations of the world as against England.

Mr. TREADWAY. It would be pretty difficult to adjust that.

Mr. HOBBS. Extremely.

Mr. TREADWAY. It could be figured out, but it would be enormously large.

Mr. HOBBS. There is nothing exact or sacred about that 30 per



cent, answering your question, but what we desire to put before you most emphatically is that as the situation now stands a tremendous injustice is being done the American producer of wool cloth or cotton cloth, or anything else. No matter what the manufacturer may be, he is put in a perilous condition as regards the import condition, and it is startling, this question of Germany. Furthermore, as we say in this memorandum, we call attention to the fact that in making any tariff bill for the protection of the American producer or preventing the dumping of foreign goods into American markets, the current rates of exchange in the different countries will have to be considered, otherwise the tariff bill would have its effectiveness impaired by every important change of value in every country.

Mr. GREEN. Heretofore, at least, on this side of the desk, we have favored making up our tariff bills on the basis of the difference in cost of production at home and abroad. Would it not be a more accurate way of getting at this to ask him the gold cost of production in each case than it would to undertake to measure it by the rate of exchange?

Mr. HOBBS. I do not see how you are going to get any other measure because these fluctuate all the time. A man might buy merchandise to-day in England and by that time exchange has gone up or down 20 per cent. How could the American business man plan his business when he does not know what competition he is up against from Europe? He has not the slightest idea from one day to another or one month to another.

Mr. GREEN. Is not the real competition that he is up against the gold cost in those countries of the article that he imports?

Mr. HOBBS. That is what we are trying to do, bring that up to the gold basis.

Mr. GREEN. But this method will not work that out, because as the result of this very matter of exchange which grows out of depreciation of the currency in those countries to a large extent, the wages in those various foreign countries have very much risen and consequently the gold cost of the articles that they were producing there.

Mr. HOBBS. Perhaps one of the other members of our committee can give it more in detail about the question of wages. The wages have risen, but if I remember the figures, in the case of Germany—this came from German sources—they paid, say, 5 marks a day before the war and at par of exchange that is, say \$1.20 in round numbers. To-day they are paying 50 marks a day. The mark is only worth 1.3 cents—1.36 was quoted yesterday. That would be 68 cents. Our American dollar to-day, in other words, can buy German labor at 68 cents a day, where before the war it took \$1.20 of American dollars to buy on the same market, although the wages of Germany are now ten times what they were before the war.

Mr. HAWLEY. That is nominally ten times.

Mr. HOBBS. Figured in their depreciated currency.

Mr. GREEN. There is a more accurate way of getting it, from those that get it, by the rate of exchange.

Mr. HOBBS. As regards the protective tariff it should be arrived at in this way you say. That is protection. This other matter is a matter of equalizing the duties on imports. They are two separate propositions. A protective tariff should be worked out on that theory, on the basis of what labor really gets on the gold basis as labor here is on the gold basis. But we have this other proposition.

The CHAIRMAN. Is this not the situation? You are endeavoring to offer a suggestion by which the intent of Congress in its last, the last tariff bill, shall now be carried into effect?

Mr. HOBBS. Yes.

The CHAIRMAN. In other words, this depreciation of the value of exchange is so tremendous that the rates of duties are very materially reduced?

Mr. HOBBS. Yes, sir.

The CHAIRMAN. Then, what you are endeavoring to accomplish is to put the American producer on a parity with foreign producers through the existing law? Is that the proposition?

Mr. HOBBS. Yes, sir; we want to get the duties collected as legal duties for the full amount suggested in the law, and in addition to that we think that the American producer is now being penalized for manufacture in this country against the depreciated currency abroad. There are two parts to the proposition. One would simply add to the act the collection of duties on the basis of the gold standard; the other would be to collect his additional charge.

Mr. TREADWAY. You are not asking for additional duty?

Mr. HOBBS. I will say, put the American producer back where he was in 1913, under the present tariff. Any new tariff bill framed to-day would be out of date to-morrow on account of the question of the exchange.

The CHAIRMAN. If I am correct in my statement, we are collecting from Great Britain under the terms of the Underwood tariff law 66 $\frac{2}{3}$  per cent of the duties that we should collect.

Mr. HOBBS. Yes, sir.

The CHAIRMAN. While from France we are collecting but 31 per cent of what we should collect if we collected as the law provides.

Mr. HOBBS. Yes, sir.

The CHAIRMAN. And from Germany we are collecting but 5 $\frac{1}{2}$  per cent of what we are entitled to?

Mr. HOBBS. That is just about the rate.

The CHAIRMAN. What you want is to amend this Treasury regulation so that those people will pay as near as possible on a par one with the other the duties provided for in the Underwood law?

Mr. HOBBS. Yes, sir; but in addition to that we want to rectify the unfair competition to which we are now subject by the fact that the invoice itself is too low.

The CHAIRMAN. Yes.

Mr. HOBBS. And do it automatically. If there is not something of the sort done in any tariff bill, you do not know where you are at. If exchange goes up, this equalizing tax would disappear the minute the exchange became normal; then they would only have to assess the duty in order to have any tariff act in effect, and that would disappear with normal conditions.

Mr. TREADWAY. You are asking no legislation covering your second proposition at all. It is simply equalizing the exchange.

Mr. HOBBS. It would take legislation; most certainly.

Mr. YOUNG. You are asking for two distinct things?

Mr. HOBBS. Yes, sir.

Mr. YOUNG. State again to the committee what these two distinct things are that you want.

Mr. HOBBS. The first is that the present regulations by which duties are assessed on the basis of foreign purchase values in depreciated currency should be rescinded, and all duties provided in the present tariff schedule should be collected on the basis of the foreign cost of normal rates of exchange. If the foreign invoice is in United States money, the difference between the current rate of exchange of the country of origin at the time of purchase and the normal rate of exchange should be added to the invoice and the duty collected



on the total. In this way there would be restored the amount of duties intended to be collected under the present tariff law.

Second. In order to correct the present alarming possibilities for dumping huge quantities of raw and manufactured products from countries with depressed currencies, it is proposed that in the case of all foreign purchases, whether dutiable or not, the Federal Government shall collect in the form of an equalizing charge on all imports, in addition to any duties provided by the tariff law, the difference between the amount paid the foreign seller figured at the current rates of exchange and the same amount figured at the normal rate of exchange. The equalizing charge thus provided for might be limited to, say, 30 per cent of the foreign value of the merchandise at par of exchange.

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STATEMENT OF MR. PAUL T. CHERINGTON, SECRETARY NATIONAL  
ASSOCIATION OF WOOL MANUFACTURERS, BOSTON, MASS.

Mr. CHERINGTON. In addition to the statement of Mr. Hobbs there are one or two points in connection with this proposal which seem to be worth bringing to your attention. As he explained to you the plans consist of two parts, the first being the raising of the basis of calculation of the duties to a uniform equality or parity with the American dollar. The second is a calculation of the duties based on those valuations at par instead of the depreciated values. The effect of that on importations is, of course, problematical. One of the most important points in connection with it, however, is the safeguard that it would offer against the enormous flooding of the country with importations which almost invariably precedes an upward revision or increase in the tariff rates. The second point is that it puts the element of certainty into business. This ought at once to increase the volume of business being done in many lines which are now prostrate. In other words, even more important than any effect that it might have upon the sale of merchandise itself is the fact that it introduces for the first time the element of positive certainty into the situation with respect to the question of importations of foreign merchandise. One of the most serious features of the uncertainty now hanging over the market is that it is keeping everybody from buying any commodities of which the importations are important. Moreover, it is perfectly inevitable that during the next 8 or 10 or 15 months an enormous increase in importations is almost certain from every country able to produce at all. And it is the checking of that flooding of the country with importations, in the first place, and, secondly, the removal of that great element of uncertainty and fear in the market, which seemed to us to be important contributions to this plan of stabilizing the basis of calculating of duties and the resumption of the schedule of 1913 on the basis on which it was designed to operate. I think those are the only two points that I have to make.

Mr. TREADWAY. Have you any concrete illustrations of importations, with bills of lading, or something of that kind, in the usual form of record of importations that would show this exact depreciation of money value?

Mr. CHERINGTON. Mr. Treadway, of course our committee came here entirely unprepared for anything like a formal hearing. We can, I am positive, secure such invoices in concrete cases for the use of the committee, if it is thought worth while.

Mr. TREADWAY. I think it should be in the record.

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STATEMENT OF MR. JACOB F. BROWN, PRESIDENT OF SLATER AND  
SONS, WEBSTER, MASS.

MR. BROWN. I am president of Slater & Sons, Webster, Mass., and am also a large owner in the Wuskanut Mills, also a member of the firm of Brown & Howe, wool importers.

I am here as a member of the executive committee of the National Association of Wool Manufacturers, and as one of the committee to represent them on this proposition, and also to represent the Association of American Worsted Yarn Spinners.

Now, so far as my personal connections are concerned, if there are any questions that anybody wants to ask me about my personal pocketbook or my paper profits, I am perfectly willing to answer them but I don't think they have very much to do with the matter I am here about, and it would only take up the time of this committee. When the tariff hearings come on, if anyone wants to grill me on those things, I will be ready. I am ready now if that is pertinent, but I think that the situation to-day is one that we are more interested in from a national standpoint than from an individual standpoint.

THE CHAIRMAN. Mr. Brown, what I am interested in more than any other question here is the necessity for the change suggested by your statement made before the committee in the collection of duty, whether upon the gold value or upon the depreciated currency value as now prevails.

MR. BROWN. I have been able to study this thing a little bit from not only the manufacturing standpoint, but from the importing standpoint, not only of raw materials, but of manufactured articles.

We made contracts to import cotton goods from England last October. At the time we made the contracts exchange was 4.20. The duty we figured at that time on the pound sterling at par, because there had been no other decision made at that time. The pound sterling at 4.20 plus 25 per cent duty on par made the goods cheaper than we could buy them in this country; therefore we bought them abroad. Inside of two months the duty was changed from 25 per cent on the par value of exchange to 25 per cent on the current exchange. That netted us about 5 per cent on the cost of the goods, I think—about that. Then exchange broke, and we began to buy exchange to pay our bills when they became due and deposited the funds in London. So when we paid for those goods, instead of paying for them at 4.20, on which we based the transaction, we paid an average of a little less than 3.50. So the saving there, plus the saving on the duty, made the goods cost us something like 22 per cent less than we expected to pay for them, and at the original basis they were cheaper than American manufactures.

Now I give you that because that is the way this thing is working out.

The decline in exchange in South America when we began to buy wool there—we did not buy very much, but when we started buying in the spring exchange was practically at par. The price of wool has declined in South America, but in addition to that decline, there has been a decline in exchange of almost 25 per cent, so the full decline in the value of the wool was not borne by the Argentine producer, because his debt was payable in pesos, and he got practically his price in pesos, but when we came to convert the pesos into American money we got 25 per cent off on exchange. Is that clear?

THE CHAIRMAN. It is to me; yes.

MR. BROWN. The same thing is happening in Australian wool and

has happened. We have to be very quick on exchange transactions. I bought some wool the other day and we figured exchange at 1.33—that is Argentine gold pesos at 1.33 for an American dollar.

The CHAIRMAN. This was South American wool?

Mr. BROWN. Yes; Argentine. Our representative there went to the bank and got the quotation for exchange. He was away from the bank a little over half an hour—three-quarters of an hour—and when he got back to that bank we had to sell drafts at 1.31. In 25 minutes the exchange fluctuated 1.5 per cent against us, which, of course, we paid. But that is the way exchange is going all the time.

On the other hand, if exchange had gone up from 1.33 to 1.36, we would have been in that much. Just the same as I have gotten wools that were delayed in shipment, that were bought on the basis of \$1.03, or \$1.04, and when we got the wool shipped we remitted to South America on the basis of \$1.20 or \$1.22, making 20 per cent on the transaction. It has worked both ways. It is fluctuating all over the lot. But the depreciation of exchange enables the Australian grower or the South American grower to sell his wool at a higher price than he would if exchange was at par, and he gets that difference because his debt is payable either in pesos in Argentina, or in pounds, shillings, and pence in Australia, and the fluctuation in exchange does not come out of his pocket. It does reduce the cost to us and that has been, in a way—or largely—responsible for the decline in wool values here. As exchange went down abroad we have had offerings of wool, offerings of tops, offerings of yarns, and those offerings have been all through the market, and as fast as the wool dealers would get those offerings they would immediately mark the domestic wool down to those prices, and the decline was fixed right in their minds. But unfortunately the demand has been such that they haven't been able to sell their wool because the mills were not running.

Now, the reason that wool is on hand to-day is not because the people have held it; they could not sell it. The mills that I represent—we have got a cotton mill, we have got a cotton converting plant, we have got a woolen plant, a worsted plant, and a cotton-warp worsted plant; a woolen plant. The worsted plant and the cotton-warp worsted plant are shut down and have been shut down since Thanksgiving because we don't consider it is safe to go ahead and manufacture any kind of goods that we can think of under to-day's conditions. I can buy those goods abroad cheaper than we can make them here, so much cheaper that we won't take the hazard.

To give you a little idea of what it means to shut down: I think we employ in all something over 3,000 operatives. Now, it isn't fun for us to shut down. I figured up the overhead of the organization the other day, if we shut down, and it runs at the rate of \$1,000,000 a year, the overhead that we can not avoid if we are closed. So you see we would run if we possibly could. It is just a question of which way we would lose the least. But I know, and anybody that has any knowledge of the business knows, that there is nothing we could make that one could not go abroad and buy much cheaper than we make it here.

The thing is right here: "We are solvent and Europe is not."

Europe is broke; they are bankrupt—all Europe. We might just as well recognize that. Now, if I have a customer that I am selling goods to and I look into his affairs and find he can't pay his debts, I tell him to clean up. I don't keep on selling him goods. I tell him, "Clean up. Compromise with your creditors, and when you are on your feet we will give you some credit." Now, you can sell anything you want to Europe if you will give them credit, but

when will you get your money? I don't think you will ever get it from some nations over there. It isn't a good credit risk. England has sold the continent on credit. She has to-day tied up in the continent as much money as she can afford. She is now looking for the only market in the world where she can get money, and that is here. Germany wants a market where she can get money, and that is here. France, Belgium, Italy—the whole crowd the same way. This is the only place in the whole world where they can get real money and really get it, and we can sell them and take long-winded credits and risk and never get the money.

Now, Europe, to my mind, has got to look out for herself first and clean up and get in shape so that her obligations are good. Then we will sell her merchandise, but in the meantime we don't think it is good business to put the American people out of business to help out bankrupt Europe, and if we let them send their merchandise in at bankrupt prices we will go out of business. If we keep solvent and fairly successful we can help Europe, but if we all go broke we can't, and the way this exchange is working and the more you study into it the more you can see that we can't run against it. The German mark has been down to 1 cent. Now, I know that the wages in Germany are ten times, in marks, what they were before the war. They are 50 marks a day where they were five marks before. At 1 cent a mark the American scale of wages is 17 times as much as the German wage; that is what it figures; it is just a matter of lead pencil; you don't need to take my word for it. Now, that is why, as against Germany, you have got to recognize that, and German products will stop enough of our mills and make the prices so low for the rest that this whole country can not stand up against it. They are already feeling it in England.

Now, I want to digress just a minute. Here is a market letter by G. Specht & Co. I don't know them. They are a Philadelphia house. This says:

#### OPPORTUNITIES FOR INCOMING PROFITS ON FOREIGN SECURITIES.

I presume they tell the truth. I am not a propagandist for this concern and don't know them and never heard of them before, but if they don't tell the truth they ought to be shut up.

The textile industry of Germany affords a splendid example of Germany's industrial recovery. Already German textiles are invading England, and the industry has had such an astoundingly successful year that its high records of peace times have been put completely in the shade. The North German Worsted and Yarn Spinning Manufactory of Bremen has declared a 12 per cent dividend and a bonus of 500 marks on each 1,000 marks.

That is 62 per cent.

In the past 12 months the company has doubled its business four times that of the previous year. Other companies such as the Aix la Chapelle Spinning Co., have paid 32 per cent in dividends; Concordia Spinning and Weaving, 16 per cent; Textile Works, 25 per cent; Gruenburg Woolen Manufacturing Co., 35 per cent; Jute Spinning and Weaving, 41 per cent; Pong Spinning, 20 per cent; Saon Thread Manufacturing, 34 per cent.

Now that is how Germany is coming back.

Mr. HULL. Where is the firm located, in Philadelphia?

Mr. BROWN. I will give you their address. It is 1329 Walnut Street, Philadelphia.



MR. WATSON. May I ask a question? I understand that the wool manufacturers have about 30,000,000 pounds of low-grade wools on hand. Is that correct?

MR. BROWN. I don't think that is right. I think you refer to the Government stock, don't you?

MR. WATSON. I understood the woolen people had it.

MR. BROWN. No, sir; the United States Government stock, that is.

MR. WATSON. That the grade is so low that it is impossible for the manufacturers to make it into fabric that would be purchased by the American people.

MR. BROWN. That is not quite the situation. The United States Government when the war ended had, if I remember rightly, something like 300,000,000 pounds of wool in stock to sell. The United States Government had a corner on all the wool in the United States, because none of us were allowed to own any wool during the war. So they had an absolute corner. The manufacturers had none, and it was all held by the United States Government. I don't want to go into that question at all because I don't want to criticise anything that has been done. Now that stock has dwindled to-day. It has been sold off, and naturally the best end of it has been sold, so to-day they have about 40,000,000 pounds left that is called this low-grade stuff, largely, probably 80 per cent. That wool to-day is not the kind of wool in ordinary times that we import for the manufacture of woolen goods. It usually goes to Germany, Belgium, to France and England, but the price of it is so low that it is being used here in carpets by the carpet mills. The large carpet mills are practically the only buyers of Government wool as the Government puts it up at auction, because it is cheaper than any fiber they can buy anywhere in the world to put into carpets.

MR. WATSON. What I wanted to ask was if Germany could afford to buy this low-grade wool at the price of exchange and manufacture it into fabrics and sell it to Austria and Germany, where they wish the more common fabrics, and make a profit, could they manufacture that low-grade wool at the price of exchange and sell it in this country and make a profit on it?

MR. BROWN. No; I don't think they could. It would be a class of wools that they always have used and which they could sell to people on the continent, in Russia, and all in through there. The plan of selling that wool right after the armistice to Belgium was along these lines, and it fell through for some reason or other, and since then it has been suggested that the wool be sold to Germany on some long credit arrangement, but there was some hitch there. You will have to ask the War Department about that.

MR. WATSON. Now, I believe there are about \$500,000,000 deposited in the hands of the Alien Property Custodian?

MR. BROWN. Five hundred million dollars.

MR. WATSON. There is an effort being made and the banks are willing to loan money, I understand, on that.

MR. BROWN. I don't think anybody would want to buy or sell on German exchange. You see this last year the German mark has fluctuated from one cent to  $4\frac{1}{4}$  cents. That is 300 per cent advance, or 325 per cent advance. Now, with exchange going like that all over the lot, I don't think any foreign nation would want to make a long-winded obligation based on exchange, so it would probably be made in American dollars. A lot of us have thought that was feasible, but just why it has not been done, I don't know.

In 1914 or earlier, when the Underwood-Simmons bill was passed, we were on a gold basis and the world was on a gold basis. Every

nation of the world was solvent and a good customer, and the tariff bill was framed with that view. To-day I think we are solvent and we are on a gold basis. It is fair to presume that England is solvent, although it is off the gold basis, but as you go farther from England, excepting possibly France and Belgium, and talk about the other nations of Europe, I don't think anybody here is willing to stand up and say that they are solvent. I know very well they are not, and they are increasing their obligations; they can't get anywhere toward solvency as long as they keep on putting out notes. Their printing presses are still running and they are overworked and increasing their printing facilities more than they are anything else. So I call them insolvent. Now, then, to offset that, and the only way we can offset it, is to prevent those bankrupt goods from coming in under this very much depreciated exchange.

Now this thing appealed to us—I am going to give the history of it—I have nothing to keep under my tongue. We were very much concerned about the whole situation and there was a meeting of the national association, the executive committee, called one morning, and we went down to have a general talk. We knew we were going into tariff matters pretty soon and would be talking tariff a little bit. We heard about the different sections of the country asking for relief. The farming communities were in terrific shape—I know something about the woolgrowers' troubles, and they are right; they tell you the truth; it is so. I know the cotton chaps down south are in bad shape. They are all in bad shape, and they are all seeking relief in the way of embargoes or loans or something. Everybody wants help. After discussion we made up our minds that there was just one thing to do, and that was to enact some emergency legislation, something that would act as a stop-gap until we got our hearings. In other words, lock the stable door before the horse got out, and the only thing that we could think of is this plan we suggested, to regulate the values of currency. We are on a gold basis; why shouldn't they come to a gold basis? And we know that that will keep out the dumping. We are not afraid of ordinary importations. That is all right. They will come anyway.

More is coming in and is going to come into this country whether this thing goes through or not.

Mr. GARNER. I was interested in your statement about Europe having to clean up, as you stated—or what expression did you give to your creditor?

Mr. BROWN. I don't know what I said, but I will say they are largely insolvent.

Mr. GARNER. I agree with you to a certain extent, but your remedy—I wanted to find your remedy. You said if you had a creditor in this country and he was broke, you would tell him to "clean up," or what expression was it?

Mr. BROWN. Make a compromise with his creditors.

Mr. GARNER. A compromise with his creditors, and then you would extend him more credit?

Mr. BROWN. Adjust himself, get on his feet. If the man has made an honest failure we will trust him on his good looks and start fresh with him.

Mr. GARNER. I don't know whether you will do Europe that way or not. I don't know how about their looks.

Mr. BROWN. No; I haven't seen very many over there that I would want to trust very far.

Mr. GARNER. Europe is broke and we are the only people that have got any money.

Mr. BROWN. \*Yes, sir.

Mr. GARNER. Now, suppose here are a number of your debtors, say 10 or 15 of them, and they are all broke and you are the only man who has any money, how are they going to clean up among themselves and get in shape to get some of your money again? I don't understand.

Mr. BROWN. I have been in that position myself, as a creditor. In my experience I have had three mills fail on me and I was the only creditor. I was easy, I guess. But we cleaned up. I settled with them as well as I could. If they could secure any money from friends or anybody else to start along again, I gave them credit. If they had gotten sick of the game and said, "No, we can't do anything," and their courage was all gone, of course we didn't bother with them. But in 1893—I didn't have such a lot of capital then, but all I had and more too was tied up in failures, so I got some experience in failures then.

Mr. GARNER. Here is the illustration that you gave and which attracted my attention. Here is Europe all broke—you made no exception.

Mr. BROWN. Sure; except as I stated.

Mr. GARNER. Now all of your debtors—you are the only man who has any money, and there are 15 other fellows here that trade with you, and they are all broke, and then you tell these gentlemen: "You clean up and I will do business with you again." How are they going to clean up when you are the only man who has any money?

Mr. BROWN. That is not so difficult. There is one thing sure, they can't clean up, if it is an individual credit with me, by taking every cent I have got out of my pocket and putting it into theirs. Now, that is the situation. We are willing to help Europe; we are glad to help her, lend her some money, to do anything—to give her this wool we are talking about on five years' credit. There are things that we have got to buy of Germany. If we haven't, some other nation has; but there is no reason why France and Germany and England should send more goods into this country than they have sent in to us for 15 or 20 years past, and break us. Charity begins at home.

Mr. GARNER. Now, how are you going to get paid? I come back to the question that you heard me ask the first gentleman who appeared this morning. We have our exports, I think now something like \$2,000,000,000 in round figures—I don't recall now what they are, but just for illustration say they are \$2,000,000,000 more than the imports.

Mr. BROWN. Yes, sir.

Mr. GARNER. Europe has no money. How are they going to trade with us unless they trade in goods?

Mr. BROWN. As long as Europe has no money we could export ten billions more than we import, as long as she doesn't have to pay for it.

Mr. GARNER. How will you ever adjust that exchange, then? How will you ever get a chance to clean up?

Mr. BROWN. The way the proposition came to me, we were asked as a firm—I am in the wool business now—to sell a certain amount of wool to a German concern on 18 months' time, one of our young men had been over in Germany for three or four months and had studied the question, and he came back with several very good schemes, and one of them was to extend credit to Germany on 18 months' time. He said there was good profit in the business. I



said, "That is all right; but how much business can we do? It won't take long to get our capital tied up; then we have got to go ahead and borrow money: and suppose somebody wants money while we have got our money out there; we would have to quit, and we couldn't do business anywhere else." Now, for a merchant to extend credit to Europe on long time—by "long time" I mean anything exceeding 90 days—is entirely impractical. We couldn't maintain our credit with the banks, and we have to do that. Now, whether you can form some of these finance corporations—whether the United States Government wants to do it I don't know: but I do know this, that outside of some very large corporations in this country, like the steel company and the locomotive companies and similar companies, it is absolutely impossible for the merchant or the manufacturer to extend any credits of any size to Europe. We can't do it. It takes all the money we can get here to do our own business, and we do our business here on a credit system of anywhere from 10 days to 60 days, and we all of us, when business is good, borrow a lot of money to do it. So we can't tie up our funds that other way.

I am not sitting up nights worrying about Europe's problems. We didn't bring them on Europe; they are her own hatching, her own babies, but I am very much interested in the troubles we have got here and I think—I don't think it is a party question; it isn't party policy; I am not here on that basis at all. When I come here to talk on protective tariff I may talk on another basis, but this is an American question and the whole of America is interested in this thing and absolutely tied up in it, and there is hardly an interest in America that would not be revived at once by the operation of some such plan as this. Now we are not tied to that plan—I mean we don't say there is no other plan, but we can't think of anything that would go through quickly that would fill the bill. If there is anything else that will go through quickly and prevent a continuing dumping process, we are for that. But this is the best thing we could think of, and we have talked it to different people—and naturally we have talked to the woolgrowers. It is perfectly proper that we should talk to the woolgrowers. We wouldn't go out and talk to a lot of bootblacks, but the woolgrower is interested in this business just the same as we are. There is no reason why any manufacturer, either now or later on, should be ashamed of being in consultation with the woolgrower. Their interests are ours; we are all American and they are closer to us than some other industries. We talked it over with them and we showed them where it would at once put a duty—or the effect of a duty—from which the United States would get the revenue, by the way—of practically 40 per cent.

It would stop foreign goods coming in; it would at once stabilize the New York market, where to-day you can not sell goods to save your lives, because people are afraid of values, and the reason they are afraid of values is perfectly evident. Don't you think that Hart, Shaffner & Marx and all those big clothiers know what they can do abroad? There isn't a man in this room that has any conception of what contracts they may have already placed there. I know what is in their minds and I know they say no matter how cheap stuff is here in this country, as long as this present condition lasts we can buy our materials in Europe cheaper than any American mill can sell them to us. And the people of that line of business know the same thing, and they don't buy except as you sell stock goods way down. Now, in the passage of an emergency measure, when they see that that advantage of buying German labor at one-seventeenth or one-

fifteenth of what we are paying in this country—when that disappears, goods will have a value and they will begin to buy goods; they will begin to give mills orders; mill wheels will start; wool will be bought; and the whole thing will start along, before the dumping is on us. But just as sure as we don't recognize that thing and the dumping does come on us, you are going to have a very, very distressing state of affairs, which as an American I don't wish to see.

I don't know as I want to take up your time further. There are so many attractive bypaths that I would like to talk for some time, but I think we want to keep right to the question as much as we can. We all admit that the country is in a deplorable shape, and as I have stayed in Washington—I want to say this, that I have been in Washington off and on for several years, the last 20 or 25 years possibly, and I never have seen the desire in Washington to be so helpful, together with a keen appreciation of the situation that confronts us to-day. It has been unheard of in the history of the world, and all recognize it. But I find a strong desire everywhere to do something, and that it should be done quickly. Everybody we have spoken to has been interested. They haven't gone to sleep when we were talking; they have sat up and taken notice because they were interested in this situation.

Now, as I say, the principal thing is time. Speed up before we are busted. A good many are busted now, but we can save a lot. Speed up. If this plan doesn't do it, give us a better one, but do something. That is what we all want done.

PRICES OF RAGS DURING THE WAR TIME AND  
AFTER.IMPORTANT FACTS SUPPRESSED BY A FRENCH BILL  
ADVOCATE.

ADVOCATES of the French compulsory branding bill have been so carried away by a feeling that something must be done that one did not hesitate to present to the Committee on Foreign and Domestic Commerce of the House of Representatives a printed statement, material portions of which he was obliged, under cross examination, to admit could not be substantiated. Another drew a baseless conclusion from an item in a daily newspaper that a cargo of imported rags was to be turned into reworked wool and made into woolen fabrics. Another by failing to give all the facts materially distorted an item based on a consular report on the prices of woolen rags in the English markets which he sent broadcast to prove that the prices of rags had increased from 300 to 1200 per cent, while millions of pounds of wool remained unsold in warehouses. Although his misrepresentation was brought home to him in a personal letter, he and his followers have continued to use his reckless misstatement and we have never seen a withdrawal of it or any excuse for its use.

The following letter from the Secretary of the National Association of Wool Manufacturers to the Secretary of the National Sheep and Wool Bureau of America shows fully what the actual facts are:

Some months ago you circulated among members of Congress and elsewhere a quotation from a consular report prepared by United States Consul Percival Gassett, stationed at Leeds, England. This report you used at that time and have frequently used since then as authority for the statement that the price of certain grades of rags increased as much as 1200 per cent between June, 1914, and December, 1919, although the largest increase actually shown was 1100 per cent.

I have made an effort to find out definitely what was wrong with this statement, which, on the surface, obviously is not an accurate reflection of the course of prices of reworked wool stock in the United States. I am going to tell you what I have found, and give you the facts to confirm what I shall say.

The figures I am submitting to you would, I believe, satisfy any unprejudiced mind that your statement about a 1200 per cent increase in the price of rags is completely erroneous. The highest percentage of increase in the table submitted by Consul Gasset is that for "old black worsteds," which, on the basis of the prices at the par conversion rate, is roughly 1100 per cent (100 per cent below your figure), while at the rates of exchange prevailing at each period covered, it is 848 per cent, or 350 per cent below your figure. This is in contrast with an increase of 291.6 per cent, or 900 per cent below your figure, in the price actually paid in the American market by a representative American concern for corresponding grades at the same time. This latter figure, you will at once recognize, is not as great as the corresponding increase in the price of many grades of new wool in this market.

If you will examine carefully Bulletin No. 24 of the Price Section of the War Industries Board, you will find that during the time from January, 1914, to the time of highest prices for 1918 the prices of domestic wools increased from 100, as the relative figure for the pre-war average, to 335, as the relative price during the early part of 1918. You are well aware, also, that during the latter part of 1919 and the early months of 1920 the prices of wool rose even higher. During war time the relative prices of rags and clips, as shown on page 31 of the report, increased from 100, representing the pre-war average, to somewhat over 450 in the third quarter of 1918. Anyone familiar with the war-time situation knows that the prices of rags rose above the prices of wool, relatively speaking, only when the demand for this material for use in the manufacture of war supplies for the Allies became so strong that it was impossible to ship the rags to Europe fast enough to keep the price from climbing.

When you quote the United States Consul at Leeds to confirm your statement, you make two serious errors. You are

using evidence which you have not adequately examined, and you quote it as accurately reflecting American market conditions when it does not.

Consul Gassett, in his report as it appeared in the Supplement to Daily Commerce Reports, No. 22 C, Annual Series, for April 28, 1920, page 11, distinctly says that the prices which he has given are per 100 pounds, the prices in sterling having been converted to dollars at par. I have secured from the Bureau of Foreign and Domestic Commerce the original quotations in shillings per hundredweight of 112 pounds. In an accompanying table I am giving you, in parallel columns for each of the three years, the original quotations in shillings and pence per hundredweight of 112 pounds, the quotations in dollars per 100 pounds as they were given in the consular report, and the corresponding quotations converted into dollars per 100 pounds at rates of exchange which were prevailing at the time represented by the quotations, namely,—\$4.86 for June, 1914, \$4.75 for December, 1918, and \$3.82 for December, 1919. You will observe that the quotations thus converted at something like the prevailing rates of exchange for each of these periods, make too high the prices as quoted by you for 1918 and for 1919. I realize that it is a matter requiring some patience to get the original figures and to work out accurately an average exchange rate which will represent the going conditions for each of these periods. I cannot understand, however, why, in case you did not care to do this, you omitted from the introduction to the table the specific explanation, which was there printed, that the prices had been converted at par. The figures as you gave them were inaccurate and misleading.

In another table, which I am submitting, I have put in parallel columns the percentages of increase in these Leeds prices, as quoted by Consul Gassett, on the basis of par exchange and prevailing rates of exchange for 1914 and 1919. They show clearly that you should not have quoted the prices converted at par without saying so. Moreover, these figures, even after revision, do not represent American conditions. These Leeds prices show a larger increase for 1919 compared with 1914 than was the prevailing increase in the American market. I have endeavored to collect material to make this



point clear, also. It has been impossible to get trustworthy quotations covering all of the grades specified in the consular report, but I have secured quotations of the prices actually paid for seven of the corresponding grades by an American concern whose records cannot be questioned. These figures, I am giving you in a table on another page. Fortunately, they include the grades showing the widest advance in Consul Gassett's figures. They show that, while the prices paid in 1914 were, in the main, not unlike those current in Leeds at that time, the prices current in this country in December, 1919, were by no means as high in most instances as those represented in the table, whether the figures are converted at par or at the prevailing rate of exchange. The accuracy of these actually paid figures is, in a measure, attested by the fact that these prices, in nearly every case, lie within the price ranges for corresponding grades quoted in the trade press of this country for the two months of December, 1918, and December, 1919, respectively, and in no case are they more than a few cents outside of that quoted range.

On the basis of these figures, which seem to me more accurately to represent American conditions than do the figures submitted by Consul Gassett, I have worked out the percentages of increase in each of the lines on which I could secure the figures. You will observe that the percentage of increase in the American market is entirely unlike that which you have circulated as being the percentage of increase in the Leeds market, with the inference that it represented American conditions.

PAUL T. CHERINGTON,

*Secretary, National Association of Wool Manufacturers.*

PRICES OF RAGS IN LEEDS, ENGLAND, AS REPORTED BY U. S. CONSUL, PERCIVAL GASSETT, AND PRINTED IN SUPPLEMENT TO COMMERCE REPORTS, ANNUAL SERIES, No. 22 C, APRIL 28, 1920, PAGE ELEVEN. CONSUL GASSETT'S FIGURES IN SHILLINGS AND PENCE, PER BRITISH HUNDREDWEIGHT, 112 POUNDS, ARE GIVEN COMPARED WITH THE FIGURES AT PAR AS QUOTED IN THE REPORT, AND FIGURES SHOWING AVERAGE RATES OF EXCHANGE PREVAILING AT TIMES SPECIFIED; NAME—LY, JUNE, 1914, (\$4.86), DECEMBER, 1918, (\$4.75), DECEMBER, 1919, (\$3.82).

	June, 1914,		At Prevail- ing Exchange Brit. price		Dec, 1918,		At Prevail- ing Exchange Brit. price		Dec, 1919,		At Prevail- ing Exchange Brit. price	
	Brit. price per 112 lbs.	80s	\$17.49	\$17.49	per 100 lbs.	per 112 lbs.	per 100 lbs.	per 112 lbs.	per 100 lbs.	per 112 lbs.	per 100 lbs.	per 112 lbs.
New Black Worsteds		80s	\$17.49	\$17.49	260s		\$56.54	\$54.45	430s		\$93.57	\$73.91
New Blue Worsteds		80	17.49	17.49	260		56.54	54.45	415		90.40	71.33
New Black Serges		56	12.18	12.18	210		45.75	44.79	260		56.54	44.69
Old Black Worsteds		25	5.44	5.44	140		30.45	29.86	300		65.24	51.57
Old Blue Worsteds		28	6.00	6.00	140		30.45	29.86	300		65.24	51.57
Old Black Serges		22	4.78	4.78	140		30.45	29.86	160		34.80	27.50
Old Dark Grey Cloths		18	3.91	3.91	80		17.40	17.06	80		17.40	13.75
Best Black Berlin												
Stockings		90	19.57	19.57	265		57.75	56.52	330		71.81	56.72
Best Colored Stockings		60	13.05	13.05	245		53.50	52.25	250		54.44	42.97
Best Tau Stockings		54	11.74	11.74	250		54.44	53.32	280		60.89	48.13
Best Black Coarse												
Stockings		47	10.22	10.22	275		59.81	58.65	280		60.89	48.13
Black Merinos		24	5.22	5.22	140		30.45	29.86	180		39.14	30.94
Blue Merinos		24/6	5.34	5.34	145		31.61	30.92	200		43.49	34.38

## RAG PRICES IN THE UNITED STATES.

JUNE, 1914-DECEMBER, 1919.

The following are prices in cents per pound actually paid by a certain American manufacturer for rags bought in the United States, of the grades and during the months specified; and the percentage of increase in these prices from June, 1914, to December, 1919.

	June, 1914	December, 1918	December, 1919	Percentage of increase June, 1914- Dec., 1919
New Black Worsteds	17.5	54.0	60.0	242.8
New Blue Worsteds	19.0	52.0	55.0	189.4
New Black Serges	12.0	50.0	55.0	358.3
Old Black Worsteds	6.0	19.0	23.5	291.6
Old Blue Worsteds	5.0	19.0	23.5	370.0
Old Black Serges	4.5	20.0	23.5	422.2
Black Merinos	5.5	19.5	23.0	318.1

PERCENTAGE RATES OF INCREASE IN PRICES OF RAGS AT LEEDS, ENGLAND,  
BASED ON REPORT BY U. S. CONSUL GASSETT.

JUNE, 1914-DECEMBER, 1919.

	Percentage of increase in shillings per 112 lbs.	Percentage of increase at par per 100 lbs.	Percentage of increase at prevailing exchange per 100 lbs.
New Black Worsteds	437.5	434.9	322.5
New Blue Worsteds	418.7	416.8	307.7
New Black Serges	364.2	364.2	266.9
Old Black Worsteds	1100.0	1099.2	847.9
Old Blue Worsteds	971.4	987.3	759.5
Old Black Serges	627.2	628.0	475.3
Old Dark Grey Cloths	344.4	345.0	251.6
Best Black Berlin Stockings	266.6	266.9	189.8
Best Colored Stockings	316.6	317.1	229.2
Best Tan Stockings	418.5	418.5	309.9
Best Black Coarse Stockings	495.7	495.7	370.9
Black Merinos	650.0	649.8	492.7
Blue Merinos	716.3	714.4	543.8



CONCLUSION JUMPED AT BY A FRENCH BRANDING  
BILL ADVOCATE.

So many writers who know little or nothing about wool manufacture are using their pens to inform the people of the one thing which they assert brought about reduced prices for wool, that it is almost impossible to catch up with all the misleading statements and reckless charges made and erroneous conclusions reached. Many have been put forth with an utter disregard of the truth, while others have been the result of pure ignorance which passes for knowledge. Editors have blandly endorsed the correctness of statements in articles teeming with assertions which could not be sustained and conclusions jumped at from unauthenticated news items. Among the latter was an article written for the September number of the *American Sheep Breeder and Wool Grower* by Mr. J. F. Walker, a prominent Ohio wool grower, who seeing an item in a New York trade paper thought, without investigating the matter, that it could be effectively used in his fight for the passage of the French compulsory branding bill. The article, which bore the unqualified endorsement of the editor, was so palpably unfair and positively misleading to those who did not, like Mr. Walker, know that rags are imported into this country for use in the paper manufacture, that it called forth from the Secretary of the National Association of Wool Manufacturers the following letter addressed to the editor of the *Sheep Breeder*. Mr. Cherington wrote:

Editor, *Sheep Breeder*:

In the September issue of your valuable magazine I have read with interest an article entitled "What's the Matter with the Sheep Industry?" written by Mr. J. F. Walker, Chairman Wool Committee, American Farm Bureau Federation. In that article Mr. Walker, I regret to say, put an interpretation on a news item which appeared in the *Daily News Record* of July 24, which was not wholly justified by the facts.

In that article Mr. Walker wrote:

At the present moment, with absolutely no demand for virgin wools, [this should have been qualified] manufacturers stating that they are not buying one pound, listen to this news item from the *Daily News Record*, Saturday, July 24th: "The American Steamship *West Isletta* is in port with a large cargo, consisting of wool, machinery and 1700 tons of rags from Antwerp, and 525 bales of rags and cuttings, and many cases of dolls from Germany."

Commenting on these supposed facts, Mr. Walker added:

Ye Gods!! what sort of clothes will rags from Germany and Antwerp make for American citizens? . . . It certainly would make the heart of every true patriot swell with pride to be arrayed in one of these suits. Enough rags on this one cargo to furnish a complete summer outfit for 125,000 people, and this is only a minor instance of a flagrant wrong.

Now Mr. Walker's comments might have been different if he had investigated the importation in question instead of jumping at a conclusion. The American steamer *West Isletta* did dock at Boston in July, having as part of her cargo many bales of rags shipped from Belgium. That far, Mr. Walker's statement is correct. When, however, he assumed that those rags were to be used in the manufacture of reworked wool for woolen clothing fabrics, he made a big blunder. The fact is, as the Boston Custom House records show, that nearly all the rags in the cargo of the *West Isletta* were paper stock. They were worth 6 or 7 cents a pound, and while they may be used to write on some day, they cannot very well be worn on the backs of American citizens, or other persons.

Under the tariff law now in effect, and Treasury Decision No. 18,151, rags for use in making reworked wool for clothing would be classed as shoddy under section 651, and entered with other wool wastes and noils.

The shipment over which Mr. Walker is so greatly perturbed was entered as paper stock under section 566 which reads: "Paper stock crude of every description including all grasses, fibers, rags, waste, all paper, rope ends, waste rope,

and waste bagging, and all other waste not specially provided for in this section including old gunny cloth and old gunny bags used chiefly for paper making.”

Had the cargo of the *West Isletta* been made up of woolen rags for use in the woolen industry, they would have been reported on page 29 of the Monthly Summary of Foreign and Domestic Commerce under the item, Rags, noils, etc., and wastes.

The Monthly Summary for July, 1920, shows that instead of 1700 tons of rags from Antwerp and 525 bales of rags and cuttings from Germany, there were from all the world only 398,236 pounds or less than 200 tons of rags, noils, and wastes valued at \$171,686, or at the rate of 43 cents per pound. This value shows conclusively that the imports under that head were chiefly noils and wastes and not rags.

Not only that, but the export of woolen rags alone from the United States during the month of July, 1920, was 695,034 pounds, or 296,798 pounds more than the imports into the United States of rags, noils, and wastes. Their value was 21 cents a pound, only half the value of our imports brought in under the head of rags, noils, and wastes. This confirms my former statement that those imports were generally not rags but wastes and noils.

On the basis of these statements, taken from official documents of the United States, Mr. Walker's misinterpretation of facts is evident, and it seems to me he should acknowledge his error and withdraw his conclusions that there were “enough rags in this one cargo to furnish a complete summer outfit for 125,000 people.”

We may hold different views about the question of the compulsory branding of wool fabrics, but I believe that as the editor of the *Sheep Breeder* you desire to be fair, and not continue your specific endorsement of Mr. Walker's article after it is shown conclusively that one of the essential statements on which it rests is not correct.

Respectfully,

PAUL T. CHERINGTON,

*Secretary, National Association of Wool Manufacturers.*

BOSTON, October 7, 1920.

The above quotation from Mr. Walker also contains a false statement about the percentage increase in the price of these rags.

Mr. Walker's letter is typical of the tactics employed in the campaign for the French-Capper bill, the use of which, if knowingly done, is disreputable, and if ignorantly done, is a warning to all on whom rests the duty to consider the bill urged for passage, to scrutinize closely all statements and assertions made by its proponents.

# ANNUAL WOOL REVIEW

## FOR 1920

### WITH ESTIMATE OF DOMESTIC WOOL PRODUCTION AND OTHER STATISTICAL RECORDS.

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THE ANNUAL WOOL REVIEW issued by the National Association of Wool Manufacturers since 1888 is presented for the thirty-second time.

The year 1920 will go down in the history of the industry as a year of marked contrasts—of exhilaration and buoyancy in the early months and of stagnation and depression in the closing months. It was a year of extremes, and the one was as abnormal and artificial as the other, both being the direct results of the Great War. It was brought home to all that the prices forced far upward by war were being forced downward by peace and that the years of inflation were past and the year of deflation was at hand. For the wool grower, the wool merchant, and the wool manufacturer it was one of the most disastrous years of which there is record.

#### DANGER HIDDEN IN THE APPARENT PROSPERITY.

At the beginning of the year the impetus of the upward movement which had characterized the year 1919 was still felt, though few sensed the danger which false prosperity created. At that time the public, stimulated by high wages and the passage of bonus appropriations for returned soldiers, was demanding goods and the finest goods at any price. Manufacturers were bidding against each other for labor, and wages and prices for commodities were soaring.

In January, at the British Government's auction in Boston of wools sent here to relieve the shortage of fine sorts for which the demand was strong, the high prices paid at the November auctions of U. S. Government wool, at which time the highest prices ever paid for wools in this country were recorded, were sustained, if not surpassed. Machinery was in full operation; orders were abundant and the prospect seemed pleasing. However, students of the industry knowing that the boom period with its accompanying high prices

could not last much longer, and seeing the dangerous tendency of the markets gave expression to warnings which were heeded, it must be recorded, by only a few. While all realized that the high prices could not continue indefinitely many hoped that the deflation process would be extended over a period of years, as it was after our Civil War. In England warnings were issued, and in this country a New York banker, speaking in Boston in January, called attention to the dangerously inflated condition of the money market; but as orders continued to come in, and as good prices continued to be obtained for wools sold, optimism persisted.

#### WOOL GROWERS' IDEAS OF WHAT PRICES SHOULD BE FOR THE NEW CLIP.

Wool merchants sent representatives into the West and some contracts were entered into at high prices. Prior to their arrival the growers had made plans to discuss in January at the annual meeting of the National Wool Growers' Association in Salt Lake City, the prices to be demanded for the 1920 clip, and to formulate plans, as was announced by Secretary S. W. McClure, "to resist any attempts of the buyers to force prices down below a level that can be considered fair to the grower." At the convention Dr. McClure is quoted as having told growers that they "ought to get anywhere from 65 to 80 cents a pound for their wool during the coming season according to the grade, staple, and character of the wool." A large Montana grower and banker was quoted in January as saying: "There will be a substantial advance in wool prices. Wool will sell from 60 cents up this year. I won't predict what the top prices for wool will be, but I will make this prediction, wool prices generally will be on a basis of from 15 to 16 per cent higher than they were for 1919 and the grower who is induced to contract at a price lower than that would mean is losing money for himself." A Texas dealer in mohair and wool was also quoted in January as saying that "there is little prospect for any drop in prices." In the early days of the Texas spring shearing buyers were numerous and with the bullish sentiment prevalent growers had visions of a dollar a pound, some refusing to contract to sell at 70 cents a pound.

That these ideas were quite generally held is evident, for in January a Boston wool letter announced that "contracting in the West appears to have stopped for the moment, as growers are asking altogether too much for their new clips. Most of them have jacked prices up to 70 and 75 cents for average wools, though the highest prices paid thus far have not exceeded 50 or 55 cents. This was for



Nevada clips. In Utah 40, 42, and 43 cents have been offered without getting the clips. Dealers here profess to be glad over the way the primary markets are opening up as they are not ready to operate heavily yet, but would be obliged to join in any general movement."

#### HIGH PRICES WERE PAID EARLY FOR TERRITORY WOOLS.

The peak of the season, which opened late in April and early in May, was touched when a Boston firm paid 72 cents for the Jericho, Utah, wools estimated to show a cost of \$1.90 to \$2.00 clean, landed in Boston. Other fine clips brought equally high prices. At a sealed bid sale an offer of 72 cents made for the Murray clip at Milford, Utah, was refused, but one for 70 cents was accepted later. Those were the high marks in marketing the Territory clip. Soon thereafter the buyers, because of the exalted ideas of the growers and the serious happenings in the market, were recalled and notified to stop buying. From that time the marketing of the Territory wools became a matter of consignment, advances of 25 cents per pound for better wools then considered liberal and yet safe proving to be more than could be secured for them later in the year.

#### OMINOUS THINGS HAPPENED IN THE BUSINESS WORLD.

Meanwhile portentous signs had been observed in the business world. In South Africa wool credits had to be stopped for a time and in March there was a serious financial crisis in Japan which was followed by wholesale cancellations of contracts. In April the British Chancellor of the Exchequer, together with the bankers, embarked on a policy of credit restriction. In the United States the Federal Reserve Board also caused a restriction of credits by raising the rates of interest. While these events were happening, the campaign of the Department of Justice to "bring down prices" was in full swing. Many retailers were tried in federal courts for alleged profiteering and the effort to reduce the price of clothing by means of the "Don't buy" slogan was pushed with vigor by Special Assistant Attorney General Howard E. Figg, who declared that "material reduction in the price of clothing and the necessities can be brought about without any decline in raw material or labor costs."

May began with little indication of the approaching debacle. On May 1, as shown by the report which appeared a month later, there were only a few more idle machines than on February 2, but a slowing-up tendency was appearing in the curtailment of machinery



running on double time, although the wool consumption in May proved to be 6,000,000 pounds less than in each of the two preceding months. The demands of the workers for a 15 per cent increase of wages based on the previous year's earnings, and made weeks earlier, was granted in May to take effect in June.

#### THERE WAS A DELUGE OF CANCELLATIONS.

On May 17, Senator David I. Walsh of Massachusetts delivered a speech in the United States Senate in which he charged the American Woolen Company with profiteering, and a few days later the Company was indicted in New York City for profiteering under the Lever Law. This, with reduction sales, which were spreading rapidly over the country, caused great uncertainty and a feeling that prices would go lower. Cancellations of orders poured into the mills in a volume so large that many were obliged to curtail production and later to close entirely. The American Woolen Company, which had lost through cancellations \$40,000,000 worth of contracts, was compelled to close its mills on June 10 for two months for lack of orders. Other manufacturers, large and small, were also deluged with cancellations. The closing down of the mills lessened the consumption of wool and produced a dead wool market. Thus it was again demonstrated that with domestic mills inactive, the domestic wool grower has no market for his product.

#### GROWERS' PRODUCTION COSTS WERE UNUSUALLY HIGH.

These sudden and untoward developments in the manufacturing branch of the industry brought about a stagnant wool market, with constantly falling prices for wools, and upset the plans of the growers to stand out for higher prices for their wools than were offered and refused early in the season. It was not a question then of refusing offers, but one of getting offers for their clips. Undeniably their position was most onerous and financially perilous. Unfortunately they had produced their clip under high cost conditions and were confronted most unexpectedly at selling time by a falling market. The growers, especially of Wyoming and Montana, had unusual difficulties to combat, dating back to the summer drought of 1919 which left the flocks in bad condition. Winter beginning early in October, 1919, instead of six weeks later, made it necessary to feed stock much earlier than usual, and winter weather continuing late in the spring months compelled later feeding than usual at a time when hay cost from \$40 to \$60 a ton. The lamb crop was not

more than half the normal number, and winter losses were abnormally heavy, so that unusual prices for both wool and lambs seemed necessary if the flockmasters were to "break even." With prices greatly reduced not only for wool, but for sheep when the wool and lambs were ready for market, and with heavy loans from local banks at the prevailing high rates of interest, the position of those flockmasters was a lamentable one.

On June 17, a conference was called at Chicago by a number of western senators to consider the financing of the wool clip, it being hoped that Chicago bankers would raise a fund of \$100,000,000 to give the needed help and by so doing wrest the wool trade away from Boston and establish it in Chicago. This failing, a further conference was held in Washington with the Federal Reserve Board at the invitation of its chairman to see what aid could be given. At that conference Chairman Harding pointed out that the Board had no authority to help sustain current prices. At the same time the growers disclaimed any desire artificially to sustain unreasonable prices, but they did not wish to be forced to sell their wool in a falling market. They would be satisfied to store their wool and await developments which they felt sure would result after the lapse of ninety days or six months in renewed activity and an approximate return to prices which prevailed a few months earlier. The result of these conferences was that the Federal Reserve Banks were to rediscount acceptances by member banks provided the draft would mature in six months.

#### AN EMBARGO WAS URGED TO SAVE THE INDUSTRY.

As the Australian auctions, scheduled to begin October 1, drew near competition of Australian wools with domestic wools was feared. To prevent the impending competition, steps were taken in October by the National Association of Wool Growers through its secretary, and by the Wool Committee of the American Farm Bureau Federation to secure, if possible, an embargo on wool by the use of the President's war powers. In November the Wool Committee of the Farm Bureau Federation urged Congress immediately to place an embargo on wool, woolens, and sheep products. On November 28, it was announced from Salt Lake City that Senator Smoot would introduce a bill in the Senate at an early date placing a complete embargo on foreign wools for a period of one year. Soon after the assembling of Congress for the short session, Senator Smoot did introduce a bill into the Senate providing for the suspension of

sections 289 to 310, inclusive, and sections 650 and 651 of the tariff law of 1913 admitting wool free, and that the importation of articles covered by these sections be prohibited until the act providing for such suspension should be repealed. Early in December a committee composed of Frank J. Hagenbarth, President of the National Wool Growers' Association, Dr. S. W. McClure, former secretary of the Association, and Professor W. C. Coffey, eastern vice-president of the Association, urged upon the Committee on Ways and Means of the House and the Agricultural Committee of the Senate the need of an embargo on the importation of wool and sheep "to save a great industry threatened by the collapse of the wool and sheep markets." Earlier the influence of men supposed to be close to the Administration was invoked, although the President, had he favored an embargo, would have been placed in the anomalous position of approving a measure designed to increase wool prices and clothing and at the same time approving the campaign of the Department of Justice to bring down high prices to lower levels. His position was peculiar enough before, with the Department of Justice fighting for lower prices and the Bureau of Markets advising farmers and growers to hold their wool clips.

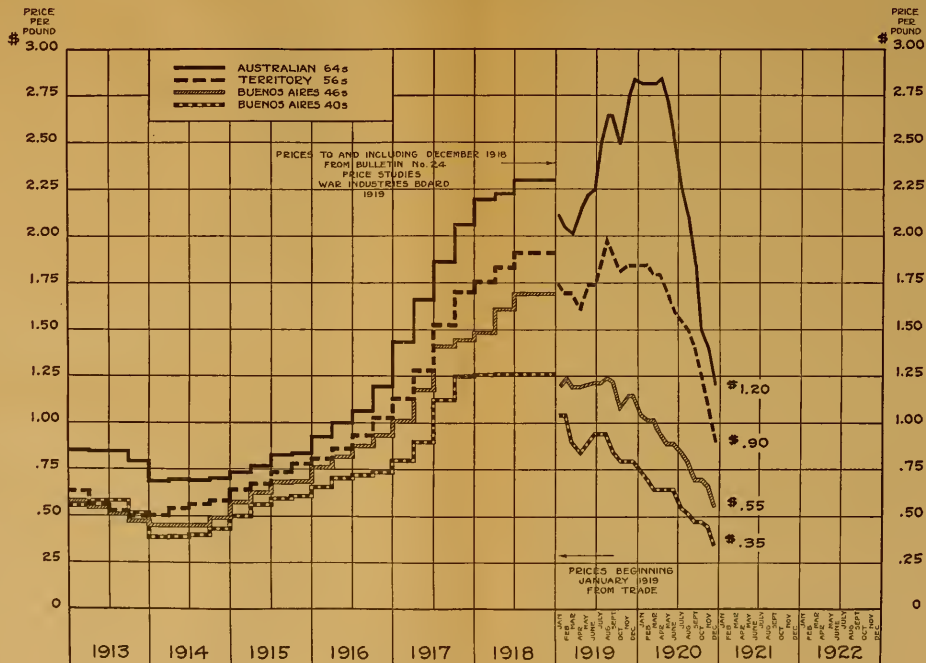
On December 20, the chairman of the Committee on Ways and Means reported to the House of Representatives an emergency tariff bill upon certain agricultural products with a recommendation that it be passed, the life of the act to be limited to ten months.

#### WOOL GROWERS WERE NOT THE ONLY SUFFERERS.

Some of the public statements of the wool growers carry the implication that they are the only class who have been offered for their product prices less than their cost of production, and that the wool merchants and wool manufacturers were in league to beat down prices of wool. All producers of raw materials, farmers in general, as well as dealers in securities, stocks and bonds, wool merchants, and wool manufacturers were sharers in a common misfortune—a perpendicular instead of a gradual descent of high prices caused by the World War. No one can deny the hardships experienced by the producers of agricultural commodities who were poorly equipped to stand the shock of shrunken values, but they have not been alone in this misfortune. Wool merchants and wool manufacturers, who have been charged by some as responsible for the growers' plight, themselves suffered enormous losses caused by the decreased value of raw materials and manufactured products made from wool

# TOPS - PRICES

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS





purchased at fancy prices, in not a few cases handsome profits of early months of the year being wiped out by equally heavy losses in the later months of the year. They, along with the wool growers, lost money with every decline in the price of wool and they would have been the last classes deliberately to plan to bring about the greatest price decline in so short a period of time in the history of the United States. What these losses were may be understood when the slump in prices of tops and yarns between January and December is considered.

These may be gathered from a consideration of the table which shows the monthly average price for tops sold in the domestic market.

MONTHLY AVERAGE PRICES FOR TOPS—YEAR 1920.

	64s Aust.	13s (56s Ter.).	46s.	40s K.
January .....	\$2.82	\$1.85	\$1.05	\$.75
February .....	2.82	1.85	1.02	.70
March .....	2 82	1.80	1.02	.65
April .....	2.85	1.80	.95	.65
May .....	2.72	1.70	.90	.65
June .....	2 55	1.60	.90	.65
July .....	2.25	1.55	.85	.55
August .....	2.10	1.50	.80	.52
September .....	1.85	1.40	.70	.48
October .....	1.50	1.25	.70	.48
November .....	1.40	1.07	.67	.45
December .....	1.20	.90	.55	.35

The next table shows the prices by months during the year for yarns made from American grown wools, and also shows how severe were the losses suffered by mills holding heavy stocks of unused yarns.



PRICES FOR YARNS BY MONTHS, JANUARY 1, 1919, TO JANUARY 1, 1921,  
INCLUSIVE.

	2/24's Medium 1/4 Blood.	2/32's 3/8 Blood.	2/40's 1/2 Blood.	2/50's Fine Medium.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
January 1, 1919 .....	1.95	2.30	2.70	3.00
April 1, 1919 .....	1.57½	2.10	2.60	3.00
July 1, 1919 .....	1.60	2.45	3.20	3.60
October 1, 1919 .....	1.95	2.60	3.75	4.25
January 1, 1920 .....	2.20	3.50	4.10	5.25
April 1, 1920 .....	2.00	3.25	4.10	5.00
July 1, 1920 .....	1.75	2.75	3.25	3.75
October 1, 1920 .....	1.20	2.07½	2.85	3.15
January 1, 1921 .....	.85	1.45	1.75	2.00

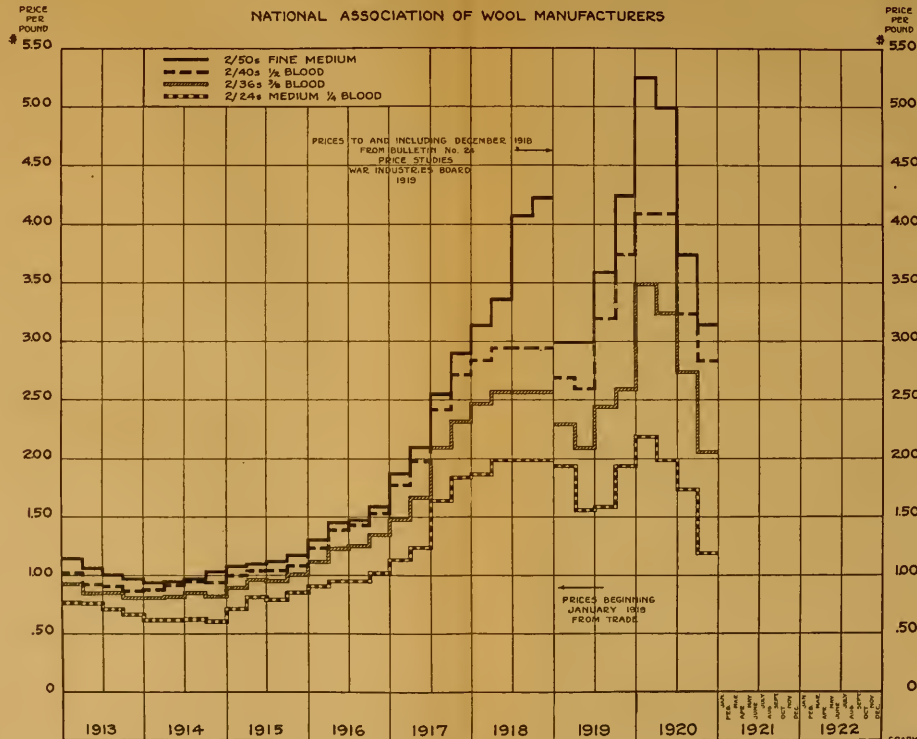
## EFFORTS TO RELIEVE THE SITUATION.

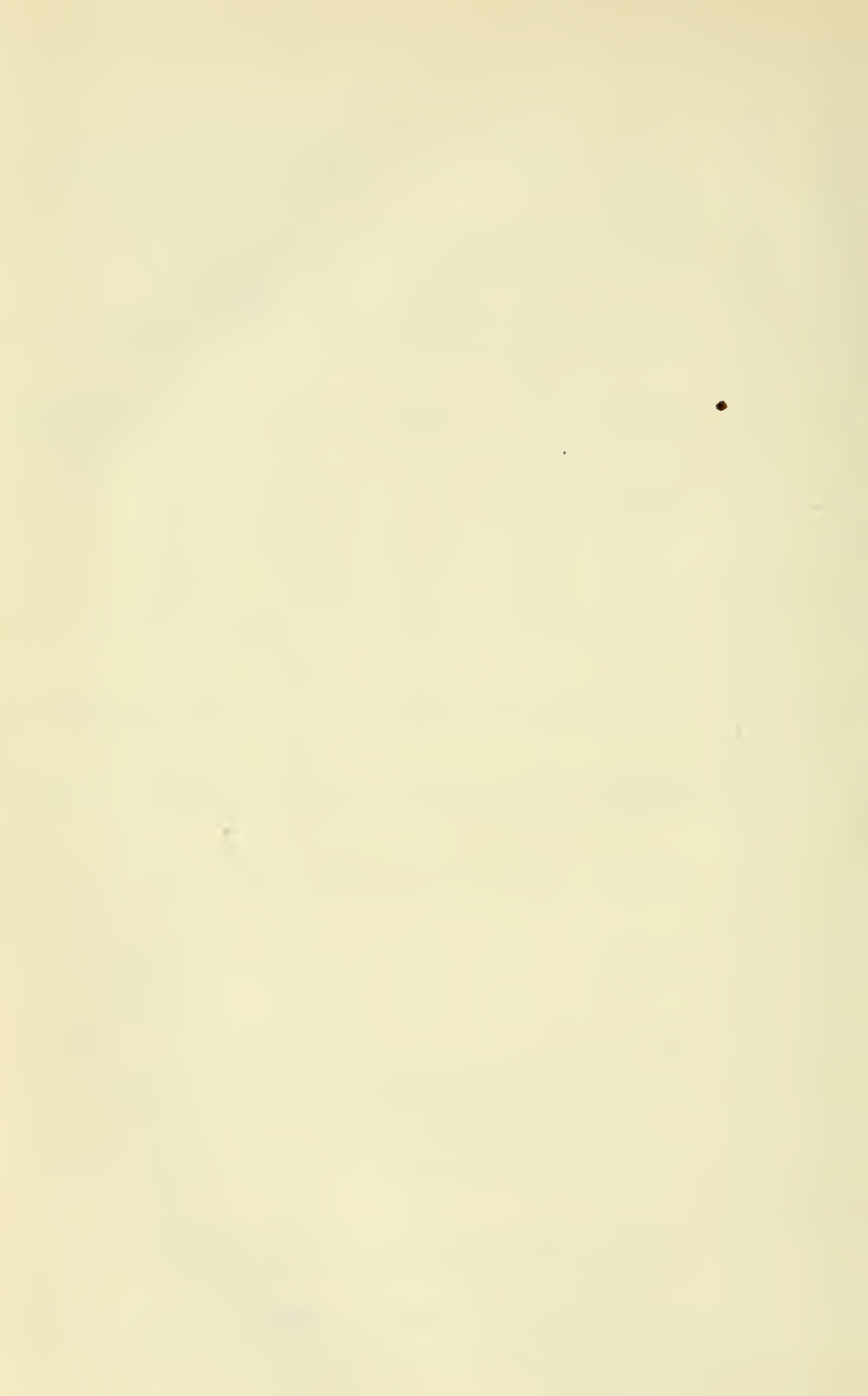
Owing to the depressed wool markets, efforts to help the situation were made by the wool growers to have blankets, automobile robes, and cloth manufactured from domestic wools, and either sold for the benefit of contributors of the wool or turned over to them, less a commission for the manufacture, at a determined price. Notwithstanding these efforts made in a number of states, the amounts of wool thus consumed proved to be a mere bagatelle and produced no favorable price effect whatever, conditions growing worse instead of better as the year wore on.

During the year the American Federation of Farm Bureaus was active in forming wool pools in the fleece growing states and urging the farmers to keep their clips off the market until prices improved. This advice, of doubtful wisdom, made it necessary to collect the wools at a central point for grading, storing, and sale of the supplies collected. The Ohio Wool Growers' Association secured a large warehouse in Columbus, in which, with one other, according to original plans, was to house all the pooled wool in the United States, it being designed to be a clearing house where the pooled wool of Ohio, Indiana, Michigan, Pennsylvania, Kentucky, West Virginia, and Southern Illinois will be stored, graded, and sold through a central committee. In October it was announced that a large warehouse would be built in six months on a three-acre site in Portland, Oregon, by a two million dollar warehouse corporation. On November 29, the Wool Committee of the American Farm Bureau Federation recommended that the following cities be designated for warehouses with the understanding that other cities may be added from time to time after thorough investigation is made and the wisdom

# WORSTED WEAVING YARNS - PRICES

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS





thereof demonstrated: Chicago, Ill.; Columbus, O.; Galveston or Houston, Texas; Syracuse, N. Y.; Lansing, Michigan, and that all warehouses be incorporated under the federal warehouse act. Pools multiplied rapidly and in most of the fleece states the farmers held their clip off the market in the hope that prices would harden and larger gains be realized, estimates of the clips retained in the pools in the various states ranging from 75 to 85 per cent of the clips.

#### IMPORTS OF FOREIGN WOOLS WERE MARKEDLY LESS THAN IN 1919.

Many reasons, some specious and inaccurate, have been advanced for the demoralization of the wool markets during the last six months of the year. Among them were the inundation of foreign wools and the use of unidentified shoddy, or reworked wools, in the manufacture of woolens. As to the imports of foreign wools, the official figures issued by the Department of Commerce show that for the eleven months of the calendar year 1920 the imports of Class I wools were 120,493,312 pounds less; the imports of Class II wools including Mohair were less by 3,533,164 pounds, and the imports of Class III wools were 56,632,835 less, or a total for all three classes of 180,659,311, than were imported in the corresponding months of 1919.

During those same eleven months in 1920, the consumption of wool, owing to the heavy consumption in the first five months, was 555,513,000 pounds, grease equivalent, as against 563,062,000 pounds in the same months of 1919, when prices were high and no disaster was expected. These figures of imports and of consumption show conclusively that neither to excessive imports in 1920, nor to under-consumption can the drop in wool values be fairly attributed.

#### HECTIC TRUTH IN FABRIC PROPAGANDA.

A plausible explanation which has deceived many was that the use of unidentified shoddy, or reworked wools, had wrought havoc with the sheep and wool industry. How that could be, when it was not the only industry suffering from the great and sudden drop in commodity prices, was not explained by its proponents. This propaganda was pushed with vigor, persistency, and a reckless disregard for consistency and truthfulness by men whose antipathy to wool manufacturers is equalled only by their ignorance of the problems of wool manufacture.

The real trouble is that owing to the chaotic condition of affairs in Europe the great wool consuming countries have not been able to buy or consume the amounts of raw materials purchased in normal years before the war. The effect of their inability to purchase for

lack of money to pay for their supplies may be fairly comprehended when it is recalled that in the season immediately preceding the war France, Belgium, Holland, Germany, and Italy bought 1,107,497 bales of Australian wool (to say nothing of the imports from South America and South Africa) and that between January 1, and June 30, 1920, the re-exports of wool from the United Kingdom to those same countries was but 122,555,400 bales.

The great problem is to get the machinery of the world in motion to produce fabrics which are sorely needed, at prices at which the users can afford to buy. While the machinery has been silent or running on reduced time, wool has been growing faster than it was being consumed. As long as this remains true, it will help but little to hold wool off the market, for it will still be in existence and though depreciating in value, will have to be marketed some day. So long as consumption is restricted, wool will be grown faster than it can be used and stocks will accumulate and prices are more likely to remain where they are or drop still more rather than to improve.

#### ILL-ADVISED MANUFACTURING PLANS URGED.

In times of stress, all kinds of plans and schemes for relieving the distress are accorded a ready hearing and not infrequently are accepted eagerly. The wool growers have had presented to them plenty of such plans, some involving the expenditure of millions of dollars, undertakings of questionable value, whose success is more than problematical. Men who have more enthusiasm than experience or knowledge of the wool manufacture laid plans to eliminate the wool merchants who are mistakenly regarded as the enemies of the wool growers. Not only were movements started to eliminate the wool merchants, but a plan was seriously put forth in at least two western states to erect large mills to consume most of the wools produced in the inter-mountain region, and to take from the eastern mills the manufacture of the products made from such wools.

In Wyoming it was announced in October that "after working secretly for two months well known sheep men, all members of the Wyoming Wool Growers' Association, have completed the ground work for the construction and operation of woolen mills," and "the incorporation papers will be filed within 30 days with a directorate and officers' personnel consisting entirely of wool producers from the Wyoming district. No stock of the new company has been or will be offered," it was stated, "for public subscription, the plan being to dispose of the entire amount exclusively to sheepmen of this State." In the same item it was announced: "It is planned to incorporate and operate the mill on the lowest possible capitaliza-

tion. There are to be no salaries for directors, no promotion stock and no watered capitalization. More than half of the proposed capital of \$750,000 has been pledged. The location of the site of the mill is to be determined by ballot of the stockholders."

But a more pretentious plan was seriously put forth the latter part of September by Mr. G. B. Quarles, a banker of Salmon, Idaho, who attempted by circular letters to get the bank presidents and cashiers of Idaho, Montana, Utah, and Wyoming to approve a plan "to organize, install, and operate a textile mill in this territory to be largely owned by the flockmasters in the states named," the justification for the undertaking being "the present financial distress resulting from two recent adverse growing seasons, the unprecedented long, hard winter we have just passed, and exorbitant prices which the livestock men were required to pay for feed the last winter, and the failure of the heretofore accustomed wool buyers to buy the 1920 wool clip." In the opinion of Mr. Quarles, the undertaking "should be well planned, well considered, and of such capacity as to enable it ultimately to utilize all the wool grown in the Northwest, where about two hundred million pounds of wool are produced annually." Although the condition of the flockmasters, according to Mr. Quarles, "is too distressingly near to bankruptcy," he thought the plan proposed could be financed easily enough by the flockmasters without contributing money. With the consent of the mortgagees, "they can contribute their wool which is as necessary to a textile mill as a manufacturing plant is necessary," and if the "flockmasters will contribute not less than one-half of next year's clip of wool as the capital of such an undertaking, the proposition will be amply financed." "One hundred million pounds of wool could be easily contributed," Mr. Quarles asserted, "to such an undertaking and with one hundred million pounds of wool the officials of the company could easily borrow to construct the mill, buy and install all the machinery, and make the undertaking a success."

And then Mr. Quarles, inexperienced in mill construction and equipment, naively declared, "and if such an undertaking is put under way now [September 28] and pushed with vim and vigor the entire clip of next season [1921] can be worked into blankets, cloth, and other products and these flockmasters could receive from their own institution the proper price for this wool."

To arouse the enthusiasm of those to whom the offer was made, Mr. Quarles cited the reported profits of a Boston wool dealer for handling the wool clip of one institution for one year. Then he pointed out the net profit, "as reports have it," of the American Woolen Company "for the first three months of the present year," and the divi-



dends of a Fall River Cotton Mill! Mr. Quarles' idea was not small, for he wrote: "I have information that a textile plant capitalized to utilize two hundred millions pounds of wool and manufacture it into blankets, cloth, and other products would cost at the present time approximately forty-eight million dollars."

This proposal can be placed beside the scheme suggested in Australia to manufacture a large portion of the wool grown in that Commonwealth and may be fittingly described, as was the latter scheme by Dalgety as "mere moonshine." Nothing has been heard in recent months from either the Wyoming proposal or the Idaho scheme of Mr. Quarles. It may not be amiss to suggest that should the wool growers of the northwest be inveigled into investing their funds in either or both undertakings, planned to relieve the distress brought upon them by the deflation in progress over the world, their last state will be worse than their first. They know their business of wool growing and should apply their science and energy to solving the many problems confronting the industry. The intricacies of wool manufacture they will leave, if they are wise, to the men whose lives have been devoted to problems which constantly present themselves and of which the wool growers know nothing. Let each stick to his trade and each will be better off in the end.

#### PREDATORY ANIMALS.

What damage is done to flocks by predatory animals is shown by the report for the fiscal year ended June 3, 1920, of the Chief of the Bureau of Biological Survey, who states that a conservative estimate of the saving effected during the year from the campaign against predatory animals amounts to about \$6,000,000.

This federal predatory animal suppression work is definitely organized in Washington, Oregon, Idaho, Montana, North and South Dakota, Wyoming, Nebraska, Colorado, Kansas, Utah, Nevada, California, Arizona, New Mexico, Oklahoma, Arkansas, and Texas. In these eighteen states federal officials co-operate closely with the state and county officials, farm bureaus, and stockmen's associations, the latter contributing during the past fiscal year \$1,114,000 toward the increasing cost of maintaining this valuable, if little heralded, work.

A force of trained hunters and trappers was employed during the year to destroy predatory animals, skins of the animals taken becoming the property of the organization paying the salary. The numbers and kinds of skins taken during the year by these hunters and trappers were: Wolves, 523; coyotes, 21,558; mountain lions, 189; bobcats, 2,987; Canada lynxes, 10, and bears, 94, or a total of 25,361, a number which shows the very real menace such enemies are

to one of the country's important industries. Since this work of extermination was begun in 1915, the skins of animals destroyed have been sold and the net proceeds amounting to more than \$240,000 turned into the Treasury.

Extended poisoning operations were also conducted over great areas in Wyoming, Utah, Nevada, Arizona, and New Mexico, by which means approximately as many coyotes were killed as by the hunters and trappers. Progress has been made in developing more effective poisons and better methods of distributing poisons for coyotes. Some sections have been so well cleared of coyotes by these means that ewes and lambs range freely without being driven to bedding grounds at night; making it possible to increase by one-third the number of ewes on a lambing ground, to save a larger percentage of lambs, and to decrease the cost of maintenance.

While wild animals prey on the cattle and sheep, there are rodent pests which attack and destroy cultivated crops and range grasses, thus depriving the flocks and herds of sustenance. The most widespread and destructive of these pests are ground squirrels, prairie dogs, and gophers which live in vast numbers over all the states west of the Mississippi River. It will take constant vigilance and many campaigns to rid the states of these destructive pests, but so much progress has been made in certain localities that those in charge of the work are encouraged to believe that with the proper effort, the desired goal can be reached and the losses reduced to a minimum.

Typical of the injury done by dogs to flocks of sheep may be cited the losses suffered, even in a state where a dog law has been enacted. The following table shows the number of sheep in Pennsylvania in the years 1917, 1918, and 1919, and the losses caused by dogs:

Year.	Number of Sheep.	Killed or Injured by Dogs.
1917 .....	820,765	6,340
1918 .....	863,243	6,981
1919 .....	881,073	6,550

Damages paid by the various counties for such losses amounted to \$200,000. This situation can be found in many other closely settled states where dogs abound, whether a dog law is on the statute books or not. It shows what a menace dogs are to the industry and how its progress is retarded in the fleece wool states by them.

#### FOREST RESERVES.

The numbers of sheep grazed during the fiscal year 1920 in the National Forests were as follows:

## SHEEP AND GOATS.

State.	Number of Stock Grazed.	
	Sheep.	Goats.
Alabama .....		
Arizona .....	346,046	5,742
Arkansas .....	32	67
California .....	515,558	13,300
Colorado .....	1,018,499	1,121
Florida .....	1,300	45
Georgia .....	5	
Idaho .....	1,686,681	
Montana .....	704,507	134
Nebraska .....		
Nevada .....	347,860	
New Hampshire .....		
New Mexico .....	402,728	33,056
North Carolina .....	78	60
Oklahoma .....		
Oregon .....	684,873	160
South Dakota .....	7,085	
Tennessee .....	77	
Utah .....	757,724	
Virginia .....	49	
Washington .....	226,769	
West Virginia .....	17	
Wyoming .....	580,696	
Total, 1920 .....	7,280,584	53,685
Total, 1919 .....	7,935,174	60,789

These figures, which show a considerable reduction from the totals of the previous year, are due chiefly to the depletion by death of range stock in the northwestern states during the winter of 1919-1920, by shipping to market, and by shipping to regions where feed could be procured.

The receipts from the National Forests in the fiscal year were \$4,793,482, or \$435,067 more than for the previous year. The receipts from grazing fees, however, decreased \$129,934 owing chiefly to the reductions in the herds and flocks of many permittees because of the exceptional conditions in the live-stock and forage markets.

At the close of the fiscal year the net area of the National Forests was 156,032,053 acres as against 153,933,700 acres the previous year.

Amid all the gloom in which the year closed, there were rays of sunshine and hope. The manufacturers seem to feel that the bottom prices have been nearly, if not entirely, reached, and that the latent demand for the wool fabrics should soon show itself and make it safe to operate machinery without the danger of cancellation of contracts and great losses. In the West the winter weather, the exact opposite of last year, found the flocks in excellent condition after a favorable summer and autumn. Prices for feed have fallen and the flockmasters' expenses will be drastically cut by a reduction in the wages paid shepherds and sheep shearers. At the same time other economies will be put into effect. Editors of some agricultural papers, who are not pessimists, are advising their readers that "those who are tempted to sacrifice sheep just now should take courage and those who are offered bargains should take them," adding "we haven't much respect for the business courage of those who sell out every time they face a business problem."

#### BRITISH GOVERNMENT'S WOOL AUCTIONS IN BOSTON.

During the year the British Government sold at auction at Boston the wools shipped to this country in compliance with the request of wool manufacturers who saw the necessity of increasing the supply of fine wools needed to meet the demands of the consuming public. The dates of the sales, amount of wool offered in bales and pounds, together with the character of the wools, are all shown in the following table:

# 44 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

Auction No.	Date.	Bales Offered.	Character.	Approximate Weight. <i>Pounds.</i>
1	January 21	6,683	Melbourne Grease	2,004,900
1A	February 5	5,397	Geelong "	1,619,100
		10,321	New Zealand "	3,096,300
				<hr/> 6,720,300
2	February 19	5,495	Sydney "	1,648,500
		5,319	Brisbane "	1,595,700
		1,694	Geelong "	508,200
		7,843	Melbourne "	2,352,900
				<hr/> 6,105,300
3	March 25	3,876	Sydney "	1,162,800
		552	" Scoured	165,600
		12,024	Brisbane Grease	3,607,200
		2,071	" Scoured	621,300
				<hr/> 5,556,900
4	April 29	12,622	Sydney Mer Grease	3,786,600
		3,389	" " Scoured	1,016,700
		8,386	Brisbane " Grease	2,515,800
		115	Geelong Crossbreds	34,600
		1,310	Melbourne "	393,000
		1,559	New Zealand "	467,700
				<hr/> 8,214,300
5	May 20	2,000	Adelaide G'sy Ex. Sup.	600,000
6	May 21	4,000	" " Good	1,200,000
		2,351	Brisbane "	705,300
		4,096	" " Good	1,228,800
		4,204	" " "	1,261,200
		1,674	Sydney "	502,200
		108	" " "	32,400
		37	Geelong "	11,100
		99	Melbourne "	29,700
				<hr/> 5,570,700
		Total,		32,167,500

Of the British Government's offerings 88,225 bales, or about 29,000,000 pounds, were sold and 19,000 bales were withdrawn.

## AUCTIONS BY THE UNITED STATES GOVERNMENT.

The United States Government also offered its stock of surplus wools at auction at Boston on various dates during the year. The following table gives the dates of the sales and the amounts offered :

Sale No.	Date.	Amount Offered.
	January 7,	8,880,000 pounds.
	" 8,	11,240,000 "
	" 9,	3,803,000 "
	" 10,	2,400,000 "
Sealed Bid.....	" 26,	275,000 "
	February 10,	8,200,000 "
	" 11,	10,180,000 "
	" 12,	3,725,000 "
	" 13,	2,300,000 "
Sealed Bid.....	" 16,	377,000 "
	March 3,	6,115,000 "
	" 4,	8,000,000 "
	" 5,	2,810,000 "
	" 6,	2,000,000 "
	April 8,	6,000,000 "
	May 8,	7,500,000 "
	June 10,	6,725,000 "
Sealed Bid.....	" 11,	495,000 "
" " .....	July 22,	646,000 "
" " .....	August 25,	1,563,000 "
" " .....	September 29,	572,000 "
	October 28,	3,000,000 "
	November 18,	4,000,000 "
	December 30,	3,400,000 "
Total,		104,206,000 pounds.

Of the above total of 104,206,000 pounds there were sold 45,878,965 pounds or 52,533,165 pounds, grease equivalent, divided as follows:

13,886,992 pounds .....	Fine.
11,226,594 " .....	Medium Crossbreds.
13,840,904 " .....	Low "
270,335 " .....	Carpet.
5,895,893 " .....	Scoured.
758,447 " .....	Tops.

Total, 45,878,965 pounds.

The tops were mostly medium grades from 46's to 56's.

On January 1, 1921, the stocks still in the hands of the Government in Boston were:

Combing Wools.....	19,091,003
Carding " .....	29,015,242½
Greasy Sundries, Combing and Carding .....	105,805
Australian and New Zealand Crossbreds.....	2,794,363
Iceland Wools.....	142
Worsted " .....	22,705
Unwashed, Miscellaneous.....	57,483

Total ..... 51,086,743½



WOOL IN HANDS OF BOSTON DEALERS AND COMMISSION MEN  
ON DECEMBER 31, 1920.

Mr. F. Nathaniel Perkins, Secretary-Treasurer of the Boston Wool Trade Association, has compiled the stocks of wool in the hands of merchants and commission men in Boston, as of December 31, 1920, as follows:

Territory, California, Texas .....	69,571,402
Fleeces, grown east of the Mississippi River and Minnesota, Iowa, and Missouri.....	2,641,950
*Scoured.....	9,437,708
*Tops.....	2,171,051
*Noils .....	1,659,728
Pulled (in grease).....	1,505,807
Foreign, Class I and Class II .....	30,262,810
Foreign, Class III .....	3,060,842
Foreign, Pulled (in grease).....	2,117,254
*Foreign, Scoured .....	12,883,408
*Foreign, Tops .....	3,580,282
*Foreign, Noils.....	710,207
Total .....	139,602,449

\* To bring these to a grease equivalent basis they should be doubled.

#### NUMBER OF SHEEP.

The Department of Agriculture estimates the wool product of the country and bases its estimate of the number of sheep in each state on the wool clip divided by the average weight per fleece, no attempt being made to count the number of sheep sheared. This method produces a good approximation of the number of sheep of shearing age, and naturally varies from the total number of sheep in the country as estimated by the Department for the country on January 1 of each year.

The estimate of fleeces sheared shows a decrease of only 82,000 fleeces, the number in 1919 being estimated at 35,983,000 and in 1920 at 35,901,000. The Department of Agriculture's estimate of the number of sheep including lambs in the country on January 1, 1921, was 45,067,000 and on the same day of 1920, 47,114,000, 48,866,000 in 1919 and 48,603,000 in 1918. Allowance must be made for winter losses from disease and exposure, as well as for slaughter, which averages at least 800,000 a month between the first of January and the time for shearing. It seems, therefore, that the

actual difference between the total number as announced for January 1, 1921, and the number of fleeces reported is not disproportionate.

Decreases are indicated in each one of the groups into which the states are divided in the table, but the total reduction, in view of the rigorous winter, and depressed prices, is less than was expected. The pulled wool product has been reduced from 48,300,000 in 1919 to 42,900,000 in 1920, which shows that fewer sheep than were expected were sent to the shambles.

The following table shows the clip in the grease of the heaviest producing states, and the scoured conditions for the years 1918, 1919, and 1920, the states being arranged according to their production of wool in the grease in 1918:

	1920.		1919.		1918.	
	Grease.*	Scoured.*	Grease.*	Scoured.*	Grease.*	Scoured.*
Wyoming .....	28,422	9,947	34,707	11,453	34,026	11,228
Montana .....	15,800	6,162	22,175	7,983	23,342	8,403
Idaho .....	21,702	8,680	21,255	7,864	19,500	7,215
New Mexico .....	15,528	5,434	15,076	4,824	17,132	5,482
Utah .....	16,150	5,975	15,800	5,530	15,800	5,530
California .....	13,165	4,739	13,172	4,741	12,545	4,526
Oregon .....	14,040	4,914	13,125	4,331	12,500	4,125
Texas .....	17,600	6,160	14,288	4,715	11,250	3,712
Total .....	142,207	52,011	149,598	51,439	146,095	50,221

\* Three ciphers omitted.

The changes which occurred in the production of 1920 were due in part, at least, to the drought in the summer of 1919 and the long severe winter of 1920. These elements considerably reduced the flocks of Montana and portions of Wyoming, while more abundant grasses and milder weather in New Mexico and Texas helped to attract increased numbers to their pastures.

NUMBER OF SHEEP AS OF JANUARY 1 FOR YEARS 1911 TO 1921,  
INCLUSIVE, ESTIMATED BY THE UNITED STATES DEPARTMENT  
OF AGRICULTURE.

The following table shows the number of sheep in the United States as of January 1, in each year since 1916 as estimated by the United States Department of Agriculture. In 1910 the census reported 52,448,000 sheep as of April 15, 1910.

The number reported as of January 1, 1921, is 2,549,000 less than the smallest previous estimated number, that for 1917. This may be due in part to the heavy losses during the long, hard winter of 1919-1920, and the unusually small lamb crop.

Year.	Number.	Value.	
		Per Head.	Aggregate.
1921 .....	45,067,000	\$6.41	\$288,732,000
1920 .....	47,114,000	10.52	495,660,000
1919 .....	48,866,000	11.63	568,265,000
1918 .....	48,603,000	11.82	574,575,000
1917 .....	47,616,000	7.13	339,529,000
1916 .....	48,625,000	5.17	251,594,000
1911-1915 Av. ....	51,430,000	3.96	203,643,000
1910 .....	*52,448,000	4.12	216,030,000

\* Census report of numbers April 15, 1910.

THE WOOL PRODUCT OF 1920.

From the Table of Production it appears that the total product of sheared wool in the United States for the year 1920 was 259,307,000 pounds and of pulled wool 42,900,000 pounds, making an aggregate wool production of 302,207,000 pounds. The average shrinkage of sheared wool in 1920 was 58.4 per cent, making the scoured equivalent of the sheared wool 107,285,162 pounds. The average shrinkage of pulled wool from the brushed to the scoured condition was 30 per cent, making the scoured equivalent of the pulled wool 30,030,000 pounds, the aggregate wool product, sheared and pulled, being 302,207,000 pounds, equivalent to 137,315,165 scoured pounds. In 1919 the sheared wool product was 265,939,000 pounds, the pulled wool 48,300,000 pounds, and the total, sheared and pulled, was 314,-

**WOOL PRODUCT OF THE UNITED STATES FOR 1920 COMPARED WITH THE PRODUCT OF 1919.**

States.	Quality.	Estimate of U.S. Department of Agriculture, 1920.			Per cent of Shrinkage, 1920.	Equivalent Quantity of Scoured Wool, 1920.	Estimate of U.S. Department of Agriculture, 1919.*			Per cent of Shrinkage, 1919.	Equivalent Quantity of Scoured Wool, 1919.	States.
		Number of Fleeces.	Average Weight per Fleecce.	Raw Wool Product.			Number of Fleeces.	Average Weight per Fleecce.	Raw Wool Product.			
			<i>Pounds.</i>	<i>Pounds.</i>		<i>Pounds.</i>						
Maine.....	10% fine, 90% medium.....	132,000	6.4	973,000	42	564,840	146,900	6.4	936,000	42	542,880	Maine.
New Hampshire.....	5% fine, 95% medium.....	31,000	4.2	204,000	43	116,280	31,000	6.6	202,000	43	116,140	New Hampshire.
Vermont.....	30% " 80% ".....	94,000	7.2	676,000	48	351,552	96,000	7.2	690,000	48	358,800	Vermont.
Massachusetts.....	Medium.....	20,000	6.5	131,000	49	75,980	19,000	6.6	125,000	42	72,500	Massachusetts.
Rhode Island.....	".....	4,000	6.1	23,000	41	13,570	4,000	5.8	25,000	41	14,750	Rhode Island.
Connecticut.....	".....	17,000	5.6	96,000	41	56,640	14,000	5.9	84,000	41	49,650	Connecticut.
New York.....	30% fine, 70% medium.....	392,000	6.9	4,083,000	48	2,153,160	775,000	6.4	4,022,000	49	2,051,220	New York.
New Jersey.....	Medium.....	16,000	7.0	109,000	41	64,310	13,000	5.9	92,000	39	54,260	New Jersey.
Pennsylvania.....	60% fine, 40% medium.....	702,000	6.5	4,560,000	51	2,234,400	716,000	7.0	5,013,000	51	2,456,370	Pennsylvania.
Delaware.....	Medium.....	4,000	5.8	32,000	41	18,880	5,000	6.7	31,000	41	18,290	Delaware.
Maryland.....	".....	128,000	6.0	825,000	41	486,750	135,000	6.0	812,000	41	479,080	Maryland.
West Virginia.....	75% fine, 25% medium.....	640,000	6.0	3,840,000	51	1,609,000	535,000	5.3	2,948,000	50	1,471,500	West Virginia.
Kentucky.....	Medium.....	29,000	6.0	3,115,000	39	2,900,130	618,000	5.9	3,211,000	39	1,958,710	Kentucky.
Ohio.....	60% fine, 40% medium.....	1,682,000	7.4	12,449,000	52	5,851,030	1,747,000	7.3	13,104,000	53	6,138,880	Ohio.
Michigan.....	25% " 75% ".....	1,845,000	7.6	10,223,000	50	5,111,600	1,279,000	7.4	9,466,000	50	4,733,000	Michigan.
Indiana.....	Medium.....	758,000	7.0	5,306,000	45	2,918,900	676,000	7.4	5,003,000	45	2,751,650	Indiana.
Illinois.....	10% fine, 90% medium.....	603,000	7.8	3,923,000	49	2,090,730	516,000	8.0	4,129,000	49	2,105,730	Illinois.
Wisconsin.....	5% " 95% ".....	745,000	7.4	5,503,000	46	3,814,400	1,305,000	7.6	4,306,000	46	1,786,224	Wisconsin.
Minnesota.....	5% " 95% ".....	498,000	7.1	3,535,000	50	1,768,000	419,000	7.5	3,143,000	50	1,571,650	Minnesota.
Iowa.....	10% " 90% ".....	637,000	7.7	4,908,000	50	2,454,000	692,000	8.0	5,216,000	50	2,648,000	Iowa.
Missouri.....	5% " 95% ".....	1,220,000	6.6	8,296,000	45	4,662,800	836,000	7.1	5,864,000	45	3,225,200	Missouri.
		10,132,000	6.91	70,028,000	48.4	36,186,772	9,487,000	7.11	67,497,000	48.7	34,623,024	
Virginia.....	Medium.....	365,000	4.6	1,680,000	38	1,041,600	414,000	5.0	2,071,000	38	1,284,020	Virginia.
North Carolina.....	".....	187,000	4.2	783,600	42	333,600	133,000	4.4	587,000	42	304,460	North Carolina.
South Carolina.....	".....	23,000	4.5	103,000	42	59,740	24,000	4.4	103,000	42	59,740	South Carolina.
Georgia.....	".....	131,000	3.2	418,000	42	242,440	142,000	3.1	440,000	42	255,200	Georgia.
Florida.....	".....	122,000	3.2	391,000	42	226,780	131,000	3.6	460,000	42	266,800	Florida.
Alabama.....	".....	91,000	4.0	364,000	41	214,760	90,000	4.2	405,000	41	238,950	Alabama.
Mississippi.....	".....	153,000	3.6	556,000	41	336,000	156,000	4.2	655,000	41	387,640	Mississippi.
Louisiana.....	".....	107,000	3.9	412,000	39	242,720	157,000	3.9	612,000	41	342,720	Louisiana.
Arkansas.....	".....	98,000	4.6	448,000	44	248,080	86,000	4.9	422,000	44	236,320	Arkansas.
Tennessee.....	".....	428,000	4.8	2,052,000	41	1,210,680	428,000	4.8	2,052,000	41	1,210,680	Tennessee.
		1,705,000	4.21	7,188,000	41.7	4,194,300	1,767,000	4.42	7,808,000	40.8	4,621,930	
Kansas.....	20% fine, 80% medium.....	278,000	7.5	2,087,000	55	939,150	231,000	7.6	1,754,000	54	648,980	Kansas.
Nebraska.....	20% " 80% ".....	230,000	8.0	1,840,000	56	219,000	210,000	7.9	1,730,000	64	692,800	Nebraska.
South Dakota.....	20% " 80% ".....	686,000	7.0	4,804,000	65	2,161,800	646,000	7.5	4,842,000	60	1,946,800	South Dakota.
North Dakota.....	20% " 80% ".....	232,000	7.5	1,737,000	58	729,540	215,000	7.7	1,654,000	63	611,980	North Dakota.
Montana.....	20% " 80% ".....	2,000,000	7.9	15,800,000	61	6,162,000	2,640,000	8.4	22,175,000	64	7,983,000	Montana.
Wyoming.....	20% " 80% ".....	3,424,000	8.3	28,422,000	60	9,947,700	4,083,000	8.5	34,707,000	67	11,453,310	Wyoming.
Idaho.....	20% " 80% ".....	2,679,000	8.1	21,702,000	65	8,680,500	2,580,000	8.4	21,255,000	63	7,864,350	Idaho.
Washington.....	10% " 90% ".....	831,000	8.7	5,490,000	67	1,811,700	672,000	8.6	5,779,000	69	1,791,000	Washington.
Oregon.....	50% " 50% ".....	1,671,000	8.4	14,040,000	65	4,914,000	1,644,000	8.5	13,125,000	67	4,231,250	Oregon.
California.....	33% fall, 67% spring.....	1,732,000	7.6	13,165,000	64	4,739,400	1,789,000	7.4	13,172,000	64	4,741,920	California.
Nevada.....	75% fine, 25% medium.....	1,233,000	7.3	9,000,000	66	3,060,000	1,382,000	7.6	10,500,000	67	3,465,000	Nevada.
Utah.....	75% ".....	2,071,000	7.8	16,150,000	63	5,975,500	2,135,000	7.4	15,800,000	65	5,530,000	Utah.
Colorado.....	50% " 50% ".....	1,821,000	8.7	15,840,000	63	3,029,000	1,861,000	6.0	9,983,000	62	2,327,150	Colorado.
Arizona.....	50% " 50% ".....	918,000	6.5	5,970,000	65	2,089,500	835,000	6.3	5,260,000	65	1,841,000	Arizona.
New Mexico.....	50% " 50% ".....	2,465,000	6.3	15,628,000	65	5,434,300	2,393,000	6.3	15,076,000	68	4,824,320	New Mexico.
Texas.....	25% fall, 75% spring.....	2,514,000	7.0	17,600,000	65	6,160,000	1,984,000	7.2	14,288,000	67	4,715,040	Texas.
Oklahoma and Indian Territory.....	50% fine, 50% medium.....	73,000	7.2	526,000	58	220,920	76,000	7.0	634,000	63	197,580	Oklahoma.
		24,064,000	7.50	182,091,000	63.3	66,903,590	24,726,000	7.71	190,634,000	65.4	65,892,530	
Pulled Wool.....		35,901,000	7.2	259,207,000	58.7	107,285,162	35,983,000	7.39	266,899,000	60.4	105,127,484	Totals.
				42,900,000	30	30,030,000			48,300,000	30	33,810,000	Pulled Wool.
Total Product.....				302,207,000		137,315,162			314,239,000		158,937,484	Total Product.

\* These original figures have been retained for comparison with the original estimate of 1920. Although the revised figures change materially the production in some states, reducing the figures for Pennsylvania, West Virginia, Kentucky, Iowa, Georgia, Florida, Montana, Wyoming, Colorado, and Oklahoma, and increasing them for Michigan, Indiana, Wisconsin, Minnesota, South Dakota, Idaho, Oregon, California, Utah, Arizona, and Texas, the total estimated production is decreased by only 601,500 pounds.



239,000, equivalent to 138,937,484 pounds scoured. The aggregate wool product in 1920 was 12,032,000 pounds less than that of 1919. On the scoured basis the product of 1920 was 1,622,319 pounds smaller than that of 1919. It should be noted that this year a revision has been made of the proportions of grades of wool in a number of western states which has an effect upon the shrinkage of wools from that group of states.

The following shows the wool product figures for the four years 1917, 1918, 1919, 1920:

	1917.	1918.	1919.	1920.
Sheared wool.....	245,573,000	257,921,000	265,939,000	259,307,000
Pulled wool.....	40,000,000	42,000,000	48,300,000	42,900,000
Total wool.....	285,573,000	299,921,000	314,239,000	302,207,000
Scoured equivalent...	129,431,055	128,270,000	138,937,484	137,315,165

#### PULLED WOOL.

The United States Department of Agriculture estimates the production of pulled wool for the year 1920 at 42,900,000 pounds, which is a decrease of 5,400,000 pounds from the estimate for 1919. This quantity may be divided into qualities as follows:

	Pounds.
Fine and fine medium .....	21,450,000
Medium and coarse.....	21,450,000



## WEIGHT AND SHRINKAGE.

For a series of years the average weight and shrinkage for the whole country has been as follows:

	Average Weight.	Average Shrinkage.
	<i>Pounds.</i>	<i>Per cent.</i>
1901.....	6.33	60.6
1902.....	6.50	60.0
1903.....	6.25	60.8
1904.....	6.50	61.6
1905.....	6.56	61.3
1906.....	6.66	61.8
1907.....	6.60	60.6
1908.....	6.70	60.5
1909.....	6.80	60.9
1910.....	6.70	60.0
1911.....	6.98	60.4
1912.....	6.82	59.3
1913.....	6.95	60.0
1914.....	6.76	59.2
1915.....	6.80	58.5
1916.....	6.86	59.1
1917.....	6.95	59.2
1918.....	7.11	60.8
1919.....	7.39	60.4
1920.....	7.22	58.7

The average yield of clean wool per pound this year is larger than in the other years shown in the above table, and equals slightly over 41 pounds to the hundred.

The next table presents a statement of the production of wool for a series of thirty years with the annual increase or decrease, and the one following it gives the production for the same period reduced to the scoured equivalent, as shown in our yearly estimates.

## FLEECE AND PULLED WOOL, WASHED AND IN THE GREASE.

	Product.	Decrease.	Increase.
1891..... <i>pounds</i>	307,401,507	2,073,349	.....
1892..... "	333,018,405	.....	25,606,898
1893..... "	348,538,138	.....	15,519,733
1894..... "	325,210,712	23,327,426	.....
1895..... "	294,296,726	30,913,986	.....
1896..... "	272,474,708	21,822,018	.....
1897..... "	259,153,251	13,321,457	.....
1898..... "	266,720,684	.....	7,567,433
1899..... "	272,191,330	.....	5,470,646
1900..... "	288,636,621	.....	16,445,291
1901..... "	302,502,382	.....	13,865,707
1902..... "	316,341,032	.....	13,838,650
1903..... "	287,450,000	28,891,032	.....
1904..... "	291,783,032	.....	4,333,032
1905..... "	295,488,438	.....	3,705,406
1906..... "	298,715,130	.....	3,426,692
1907..... "	298,294,750	.....	948,176
1908..... "	311,138,321	.....	12,833,571
1909..... "	328,110,749	.....	16,972,428
1910..... "	321,362,750	6,747,999	.....
1911..... "	318,547,900	2,814,800	.....
1912..... "	304,043,400	14,504,500	.....
1913..... "	296,175,300	7,868,100	.....
1914..... "	290,192,000	5,983,300	.....
1915..... "	288,777,000	1,415,000	.....
1916..... "	288,490,000	287,000	.....
1917..... "	285,573,000	2,917,000	.....
1918..... "	299,921,000	.....	14,348,000
1919..... "	314,239,000	.....	14,318,000
1920..... "	302,207,000	12,032,000	.....

Beginning with the year 1914 the estimates are those of the United States Department of Agriculture. The wool product for the year 1920 shows a decrease of 12,032,000 pounds over that for 1919, which was 14,318,000 pounds larger than that of 1918. The Department has decreased the pulled wool figures by 5,400,000 pounds, and it makes the fleece wool product for 1920, 259,307,000 pounds, and the pulled wool 42,900,000 pounds.

## SCOURED WOOL, FLEECE, AND PULLED.

	Product.	Decrease.	Increase.
1891..... pounds	139,326,703	301,517	.....
1892..... "	145,300,318	.....	5,973,615
1893..... "	151,103,776	.....	5,803,458
1894..... "	140,292,268	10,811,508	.....
1895..... "	125,718,690	14,573,578	.....
1896..... "	115,284,579	10,434,111	.....
1897..... "	111,365,987	3,918,592	.....
1898..... "	111,661,581	.....	295,594
1899..... "	113,958,468	.....	2,296,887
1900..... "	118,223,120	.....	4,264,652
1901..... "	126,814,690	.....	8 591.570
1902..... "	137,912,085	.....	11,097,395
1903..... "	124,366 405	13,545.680	.....
1904..... "	123,935,147	431,258	.....
1905..... "	126,527,121	.....	2,591,974
1906..... "	129,410,942	.....	2,883,821
1907..... "	130,359,118	.....	948,176
1908..... "	135,360,648	.....	5,001,530
1909..... "	142,223,785	.....	6,863.137
1910..... "	141,805,813	417,972	.....
1911..... "	139,896,195	1,809,618	.....
1912..... "	136,866,652	3,029,543	.....
1913..... "	132,022,080	4,844,572	.....
1914..... "	131,840,680	.....	613.600
1915..... "	131,987,960	.....	147,280
1916..... "	130,755,750	1,232,210	.....
1917..... "	129,431,055	.....	1,324,695
1918..... "	130,611,290	.....	1,180.235
1919..... "	138,937,484	.....	8,326.194
1920..... "	137,315,165	1,622,319	.....

The imports of wool in October, 1920, amounted to 8,706,292 pounds, as compared with 20,982,878 pounds in October, 1919.

The gross imports for the four months ended October 31, 1920, were as follows:

<b>1920.</b>	<b>Class I.</b>	<b>Class II.</b>	<b>Mohair, etc.</b>	<b>Class III.</b>	<b>Total.</b>
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
July .....	7,325,635	250,804	417,529	1,450,642	9,444,610
August .....	11,063,635	891,495	81,268	2,411,412	14,447,810
September .....	10,155,913	552,188	142,519	885,964	11,736,534
October.....	5,864,358	117,501	72,645	2,651,788	8,706,292
<b>Total .....</b>	<b>34,409,541</b>	<b>1,811,938</b>	<b>713,961</b>	<b>7,399,806</b>	<b>44,335,246</b>

For the corresponding four months of the four preceding years the imports were:

	<b>Class I.</b>	<b>Class II.*</b>	<b>Class III.</b>	<b>Total.</b>
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1916.....	34,162,927	5,708,869	13,510,129	53,950,153
1917.....	65,883,543	9,642,867	18,623,354	94,145,764
1918.....	109,837,410	2,401,527	28,821,618	141,208,359
1919.....	139,557,785	6,083,813	34,312,553	180,755,779

\* Including mohair, alpaca, etc.

#### THE ANNUAL WOOL SUPPLY.

The quantity of wool retained for consumption in the United States from 1890 to date is shown in the following table. As the wool clip of the year reaches the market during the governmental fiscal year, the clip of a calendar year is added to the imports of the fiscal year and thus the supply of new wool available for the year is clearly indicated. To illustrate, the clip of the year beginning January 1, 1890, is added to the imports of the fiscal year 1890-91, which began six months later, on July 1, 1890.

## WOOL PRODUCED, IMPORTED, EXPORTED, AND RETAINED FOR CONSUMPTION.

Fiscal Year.	Total Imports.	Exports, Domestic and Foreign.	NET IMPORTS.		Production.	Retained for Consumption.	FINE WOOL.	
			Classes I. and II.	Class III.			Retained for Consumption.	Per cent of Foreign.
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	
1890-91..	129,303,648	2,930,045	36,783,501	89,882,024	309,474,856	435,848,459	345,966,435	10.63
1891-92..	148,670,652	3,210,019	53,350,167	92,312,922	307,101,507	452,562,140	360,249,218	14.81
1892-93..	172,433,838	4,310,495	46,189,082	122,026,119	333,018,405	501,141,748	379,115,629	12.18
1893-94..	55,152,555	6,497,654	7,167,380	42,007,798	348,538,138	397,193,069	355,185,271	2.02
1894-95..	206,081,890	6,622,190	98,388,318	105,402,507	325,210,712	524,722,428	419,319,921	23.46
1895-96..	230,911,473	12,972,217	126,966,355	97,918,882	294,296,726	512,235,982	414,317,100	30.64
1896-97..	350,852,026	8,700,598	253,282,735	112,141,457	272,474,708	614,626,136	502,485,908	46.84
1897-98..	132,795,302	2,625,971	47,480,033	82,810,437	259,153,251	389,322,582	306,512,145	15.50
1898-99..	76,736,209	14,095,335	3,349,870	60,947,423	266,720,684	329,361,558	268,387,135	1.25
1899-1900	155,918,455	7,912,557	44,680,424	105,525,783	272,191,330	420,197,228	314,671,445	14.20
1900-01..	103,583,505	3,790,067	32,865,844	67,127,159	288,636,621	388,430,059	321,502,465	10.10
1901-02..	166,576,966	3,227,941	69,315,286	93,542,199	302,502,382	465,851,407	371,694,390	18.65
1902-03..	177,137,796	3,511,914	54,747,533	119,397,268	316,341,032	489,966,914	370,569,646	14.63
1903-04..	173,742,834	3,182,803	55,999,645	114,880,236	287,450,000	458,010,031	345,129,795	16.22
1904-05..	249,135,746	2,561,648	134,407,321	112,292,726	291,783,032	538,357,130	426,066,402	31.54
1905-06..	201,688,668	5,642,859	98,336,137	97,902,153	295,488,438	491,534,247	393,632,094	24.99
1906-07..	203,847,545	3,446,748	91,726,655	108,888,982	298,715,130	499,115,927	390,226,945	23.50
1907-08..	125,980,524	5,626,463	57,846,442	62,690,077	298,294,750	418,648,811	346,141,192	16.71
1908-09..	266,409,304	3,523,975	164,867,536	99,046,169	311,138,321	574,023,650	476,005,877	34.60
1909-10..	263,928,232	4,055,473	139,846,192	120,074,087	323,110,749	587,983,508	467,909,421	29.90
1910-11..	137,647,641	8,205,699	45,414,054	84,027,888	321,362,750	450,804,692	366,776,804	12.38
1911-12..	193,400,713	7,719,870	85,531,845	106,148,998	318,547,900	510,228,743	404,078,845	21.12
1912-13..	195,293,255	4,423,161	80,883,313	109,986,781	304,043,400	494,913,494	384,926,713	21.00
1913-14..	247,648,869	1,141,874	144,839,106	101,667,879	296,175,300	542,682,285	441,014,406	32.84
1914-15..	308,083,429	7,259,934	236,631,246	64,192,249	290,192,000	591,015,495	526,823,246	44.91
1915-16..	534,828,022	1,803,570	423,755,453	109,268,999	288,777,000	821,801,452	712,532,452	59.49
1916-17..	372,372,218	3,978,724	302,869,173	67,672,671	288,498,600	656,892,094	589,219,423	51.40
1917-18..	379,129,934	1,827,873	319,301,542	58,993,662	285,573,000	662,875,061	603,881,399	52.87
1918-19..	422,414,985	1,151,089	337,631,158	84,178,455	299,921,000	721,184,896	637,006,441	53.00
1919-20..	427,578,038	20,152,110	347,168,453	72,225,748	314,239,000	724,633,201	641,255,343	52.00
1920-21..	.....	.....	.....	.....	302,207,000	.....	.....	.....

The proportion of foreign fine wools in 1920 was one per cent less than in the preceding year, which, with the exception of the years 1915-16 and 1917-18, is the largest percentage recorded. The total quantity of fine wools retained for consumption, both foreign and domestic, amounted to 641,255,343 pounds.

The net imports of Class I and II wools amounted to 347,168,453 pounds. The net imports of Class III wools were 72,225,748 pounds.

The following table shows the total and average annual supplies for five-year periods, beginning in 1888, the ten-year periods 1888-1897, 1893-1902, 1903-1912, and 1908-1917, and the supply for 1918, 1919, and 1920.

WOOL SUPPLY, 1888-1920. — DOMESTIC PRODUCTION AND IMPORTS  
LESS EXPORTS.

Fiscal years ended June 30.	All wools.	Fine wools.
	<i>Pounds.</i>	<i>Pounds.</i>
1888-1892. Five years, total.....	2,122,407,842	1,686,818,840
Annual average, five years.....	424,481,568	337,363,768
1893-1897. Five years, total.....	2,549,920,592	2,070,423,829
Annual average, five years.....	509,984,118	414,084,766
1888-1897. Ten years, total.....	4,672,328,434	3,757,242,669
Annual average, ten years.....	467,232,843	375,724,267
1898-1902. Five years, total.....	1,988,771,621	1,582,374,537
Annual average, five years.....	397,755,324	316,474,907
1893-1902. Ten years, total.....	4,538,692,213	3,652,798,366
Annual average, ten years.....	453,869,221	365,279,837
1903-1907. Five years, total.....	2,476,984,249	1,925,618,882
Annual average, five years.....	495,396,850	385,123,776
1898-1907. Ten years, total.....	4,465,755,870	3,507,993,419
Annual average, ten years.....	446,575,587	350,799,342
1908-1912. Five years, total.....	2,541,688,925	2,060,912,139
Annual average, five years.....	508,337,785	412,182,428
1903-1912. Ten years, total.....	5,018,673,174	3,986,531,021
Annual average, ten years.....	501,867,317	398,653,102
1913-1917. Five years, total.....	3,107,304,820	2,654,513,190
Annual average, five years.....	621,460,964	530,902,636
1908-1917. Ten years, total.....	5,648,993,747	4,715,425,329
Annual average, ten years.....	564,899,375	471,542,533
1918.....	662,875,061	603,881,399
1919.....	721,184,896	637,006,441
1920.....	724,633,201	641,255,343

MOHAIR.

As no official statistics of the production of mohair in this country are available, we must rely upon estimates by the largest users in the country who place it this year at 7,000,000 pounds, a decrease of 1,000,000 pounds from the estimate of 1919.

Texas, Oregon, New Mexico, California, and Arizona are the principal sources of supply of domestic mohair.



MOHAIR PRODUCTION IN THE UNITED STATES.  
*United States Census Reports and Commercial Estimates.*

Year.	Fleeces.	Weight of Mohair.
		<i>Pounds.</i>
1900.....	454,932	961,328
1910.....	1,682,912	3,778,706
1912.....		4,000,000*
1913.....		4,500,000*
1914.....		4,500,000*
1915.....		6,000,000*
1916.....		6,000,000*
1917.....		6,000,000*
1918.....		6,000,000*
1919.....		8,000,000*
1920.....		7,000,000*

\* Commercial estimate.

The following table, compiled from official figures of the United States Department of Agriculture, shows the receipts, slaughter, and shipments of sheep at ten of the principal markets for ten months of 1920, January to October, inclusive. Contrary to expectations the receipts, shipments, and slaughter were all noticeably smaller than in the corresponding months of 1919.

RECEIPTS, SLAUGHTER, AND SHIPMENTS OF SHEEP AT TEN OF THE PRINCIPAL MARKETS FOR TEN MONTHS, JANUARY TO OCTOBER 31, 1920, COMPARED WITH SAME TEN MONTHS OF 1919. COMPILED FROM REPORTS OF BUREAU OF MARKETS, U.S. DEPARTMENT OF AGRICULTURE.

	Receipts.		Slaughter.		Shipments.	
	1920.	1919.	1920.	1919.	1920.	1919.
Buffalo .....	777,479	850,283	209,052	158,837	568,457	691,446
Chicago.....	3,230,517	4,204,336	2,305,456	3,153,673	925,161	1,050,663
Denver .....	1,613,098	1,491,016	213,785	235,520	1,343,545	1,239,768
East St. Louis..	511,224	610,272	390,702	496,999	126,182	105,475
Jersey City....	1,245,341	1,243,527	1,245,157	1,243,524	184	.....
Kansas City....	1,460,778	1,696,272	923,237	1,027,455	534,521	685,698
Omaha.....	2,536,890	3,293,772	1,223,168	1,344,462	1,313,662	1,949,250
St. Joseph.....	731,892	846,565	526,468	584,739	186,101	255,056
St. Paul.....	508,224	599,685	209,189	162,559	288,242	494,206
Sioux City.....	286,385	503,596	152,693	200,667	134,478	310,783
	12,901,828	15,339,324	7,398,907	8,608,435	5,420,533	6,785,350

The next table shows by months the slaughter of sheep at ten principal markets for the ten months of 1920, January to October, inclusive.

SLAUGHTER OF SHEEP AT TEN PRINCIPAL MARKETS BY MONTHS FOR THE TEN MONTHS OF THE CALENDAR YEAR 1920.

	Buffalo.	Chicago.	Denver.	East St. Louis.	Jersey City.	Kansas City.
January . . . . .	30,780	223,349	20,966	33,563	111,140	93,318
February . . . . .	27,720	225,218	24,558	21,201	86,303	92,869
March . . . . .	26,151	172,505	37,230	24,612	79,246	117,432
April . . . . .	13,891	140,840	27,573	14,233	68,989	72,800
May . . . . .	12,674	173,455	17,392	31,718	58,202	109,789
June . . . . .	12,255	237,359	8,314	71,414	118,895	97,823
July . . . . .	12,647	285,691	7,643	61,346	212,329	67,991
August . . . . .	18,214	308,602	14,434	51,286	167,125	91,229
September . . . . .	26,948	304,050	27,753	45,716	188,691	100,766
October . . . . .	27,772	234,387	27,922	35,613	154,237	79,220
Total, 10 months .	209,052	2,305,456	213,785	390,702	1,245,157	923,237

	Omaha.	St. Joseph.	St. Paul.	Sioux City.	Monthly Total.
January . . . . .	136,398	56,254	30,676	31,511	767,955
February . . . . .	120,440	61,696	16,399	24,029	700,433
March . . . . .	134,696	65,960	4,954	12,938	675,724
April . . . . .	114,471	61,630	4,651	12,736	531,814
May . . . . .	72,485	35,127	7,649	7,380	525,871
June . . . . .	82,392	41,353	6,479	5,231	681,515
July . . . . .	128,060	49,788	12,071	6,785	844,351
August . . . . .	161,293	54,470	29,527	10,826	907,006
September . . . . .	191,492	57,292	40,190	22,111	1,005,009
October . . . . .	81,441	42,898	56,593	19,146	759,229
Total, 10 months .	1,223,168	526,468	209,189	152,693	7,398,907

#### THE COURSE OF PRICES.

While the drop in wool prices was marked during 1920, the prevailing prices in a dull market in October were generally double those, grade for grade, quoted in 1910.

The following table shows the relative prices in Boston in October for eleven years :

## BOSTON WOOL PRICES.

Boston prices of domestic wools in October for the last eleven years are shown in the table which follows :

## COMPARATIVE PRICES OF DOMESTIC WOOL IN BOSTON, OCTOBER, 1910-1920.

	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910
<b>OHIO, PENNSYLVANIA, AND WEST VIRGINIA.</b>											
(Unwashed.)											
Fine	42	67	67	63	32-33	26-27	23-24	20-21	23-24	20-21	22-23
Blood	42	80	78	75	39-40	34-35	27-28	23-24	29-30	25-26	28-29
"	40	67	78	75	40-42	36-37	26-27	23-24	30-31	24½-25½	28-29
"	38	64	77	75	40-42	35-36	26-26½	23-24	30-31	24-25	27-28
Fine Delaine	60	83	75	75	36-37	30-31	24-25	22-23	28-29	24-25	26-27
<b>MICHIGAN, WISCONSIN, NEW YORK, ETC.</b>											
(Unwashed.)											
Fine	40	65	64	60	29-30	24-25	22-23	19-20	22-23	20-20½	20-21
Blood	40	75	76	74	37-38	33-34	26-27	22-23	28-29	24½-25	27-28
"	38	60	77	74	41-42	35-36	26-26½	22-23	29-30	24-24½	27-28
"	36	60	76	74	40-41	34-35	25-25½	22-23	29-30	23½-24	26-27
Fine Delaine	55	80	73	72-73	35-36	27-28	23-24	21-22	26-27	23-24	25-26
<b>KENTUCKY AND INDIANA.</b>											
(Unwashed.)											
Blood	42	63	79	80	44-45	37-38	27-27½	24-25	31-32	24½-25½	28-29
"	40	62	78	80	43-44	37-38	25-26	24-25	31-32	24-25	27-28
Braid	28	35	68	67-68	36-37	33-34	22-23	23-24	26-27	22-23	22-23
<b>MISSOURI, IOWA, AND ILLINOIS.</b>											
(Unwashed.)											
Blood	38	60	76	72	40-42	35-36	25½-26	22-23	29-30	23½-24	27-28
"	36	60	75	72	39-40	35-36	25-26	22-23	29-30	23-23½	25-26
Braid	28	35	67	67-68	36-37	31-32	21-22	22-23	26-27	21½-22	22-23
<b>TEXAS.</b>											
(Scoured Basis.)											
12 mos., fine and fine medium	1.00	1.80	1.75	1.70	80-85	67-68	56-58	50-52	60-62	52-53	*
Spring, fine and fine medium	85	1.60	1.60	1.50	70-75	60-62	*	*	*	*	*
Fall, fine and fine medium	65	1.50	1.50	1.48	57-58	55-57	45-47	42-43	48-50	40-42	*
<b>CALIFORNIA.</b>											
(Scoured Basis.)											
12 months, fine	90	1.80	1.75	1.68	80-85	65-67	*	*	*	*	*
Spring, fine	75	1.60	1.60	1.50	65-70	60-62	*	*	*	*	*
Fall, fine	50	1.30	1.47	1.45	60-62	54-56	*	*	*	*	*
<b>TERRITORY WOOL:</b>											
<b>MONTANA, WYOMING, UTAH, IDAHO, OREGON, ETC.</b>											
(Scoured Basis.)											
Staple, fine and fine medium	1.20	2.00	1.85	1.80	88-90	70-72	58-60	52-54	67-68	59-61	62-63
Clothing, fine and fine medium	1.00	1.85	†	1.65	83-85	67-68	54-55	47-49	60-62	50-53	55-56
Blood	90	1.70	1.78	1.68	*	68-69	*	*	*	*	*
"	75	1.35	1.55	1.42	*	66-67	*	*	*	*	*
"	55	1.15	1.40	1.28	*	62-64	*	*	*	*	*
<b>NEW MEXICO.</b>											
(Scoured Basis.)											
No. 1	95	1.56	1.65	1.70	78-80	64-66	54-55	47-48	58-60	47-48	55-57
No. 2	75	1.40	1.55	1.58	63-65	58-60	46-48	42-43	52-54	42-43	46-47
No. 3	40	1.10	1.35	1.38	58-60	53-55	38-40	37-38	45-47	33-36	36-37
<b>GEORGIA AND SOUTHERN.</b>											
(Unwashed.)	25	58-64	68-70	70-71	37-38	33-34	24-25	22-23	28-30	22-23	24-25

\* Grade not quoted.

† But little in the market.

# DOMESTIC WOOLS

## NATIONAL ASSOCIATION OF WOOL MANUFACTURERS

PRICE  
PER  
POUND  
\$ 2.80

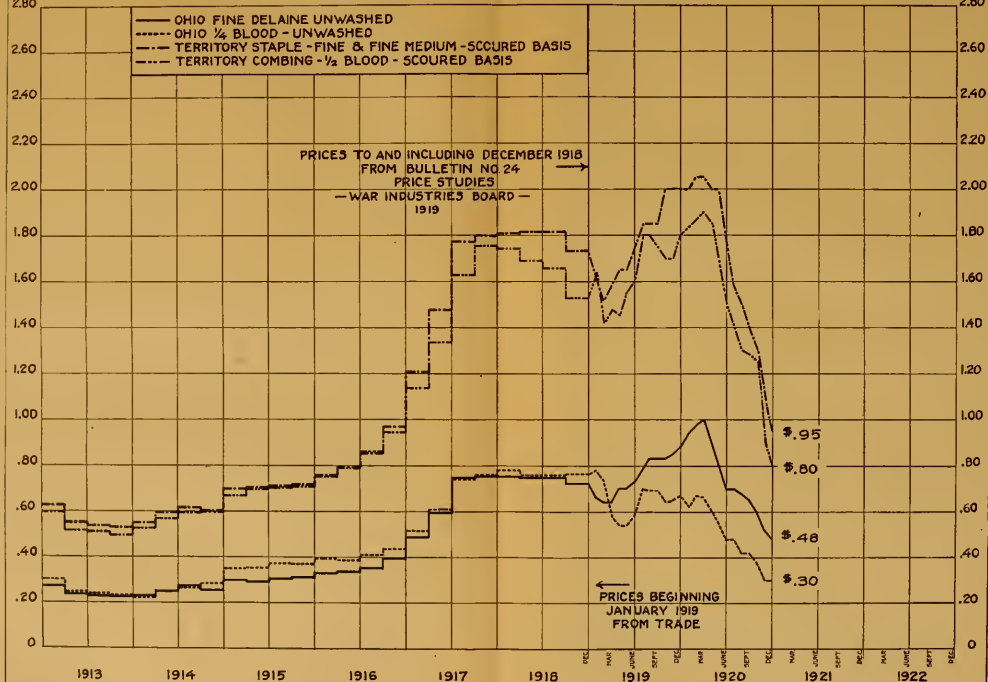
PRICE  
PER  
POUND  
\$ 2.80

- OHIO FINE DELAINE UNWASHED
- - - OHIO 1/4 BLOOD - UNWASHED
- - - TERRITORY STAPLE - FINE & FINE MEDIUM - SCOURD BASIS
- - - TERRITORY COMBING - 1/2 BLOOD - SCOURD BASIS

PRICES TO AND INCLUDING DECEMBER 1918  
FROM BULLETIN NO 24  
PRICE STUDIES  
— WAR INDUSTRIES BOARD —  
1919

PRICES BEGINNING  
JANUARY 1919  
FROM TRADE

\$ .95  
\$.80  
\$.48  
\$.30





## BOSTON RECEIPTS AND SHIPMENTS OF WOOL.

The following table shows the receipts of domestic and foreign wools separately and also the total receipts, with the reported shipments of all wools for a period of fourteen years, as compiled by the Boston Chamber of Commerce. There is a wide difference between the quantity of wool received and the quantity reported shipped from Boston, which is accounted for in part by the refusal of some companies to report shipments, and the evidently large quantities transported by motor trucks and other vehicles.

## YEARLY RECEIPTS AND SHIPMENTS OF WOOL AT BOSTON FOR FOURTEEN YEARS 1907-1920, INCLUSIVE.

YEAR.	RECEIPTS.			SHIPMENTS REPORTED.
	Domestic.	Foreign.	Total.	All Wools.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1907.....	185,879,807	96,212,199	282,092,006	236,246,461
1908.....	190,470,231	76,097,317	266,567,548	198,523,505
1909.....	247,463,739	149,487,123	396,950,862	263,810,867
1910.....	195,536,835	81,173,849	276,710,684	217,761,880
1911.....	230,391,364	67,759,223	298,150,587	217,239,723
1912.....	236,458,198	124,143,562	360,601,760	276,912,464
1913.....	161,800,680	63,336,325	225,136,325	183,710,214
1914.....	190,730,629	144,145,491	334,876,120	267,149,305
1915.....	181,700,678	247,914,385	429,615,063	272,473,422
1916.....	205,194,677	234,998,488	440,193,165	302,868,263
1917.....	210,124,902	296,461,275	506,586,177	279,850,815
1918.....	183,296,708	320,180,422	503,477,130	200,558,487
1919.....	213,904,935	265,112,318	479,017,253	149,646,027
1920.....	105,706,601	168,356,516	274,063,117	136,040,250

- The following tables show the annual receipts of domestic and foreign wool in Boston by months for the years 1917 to 1920, inclusive, and the shipments in pounds from Boston as reported by the several railroads and by sea for the year 1920:



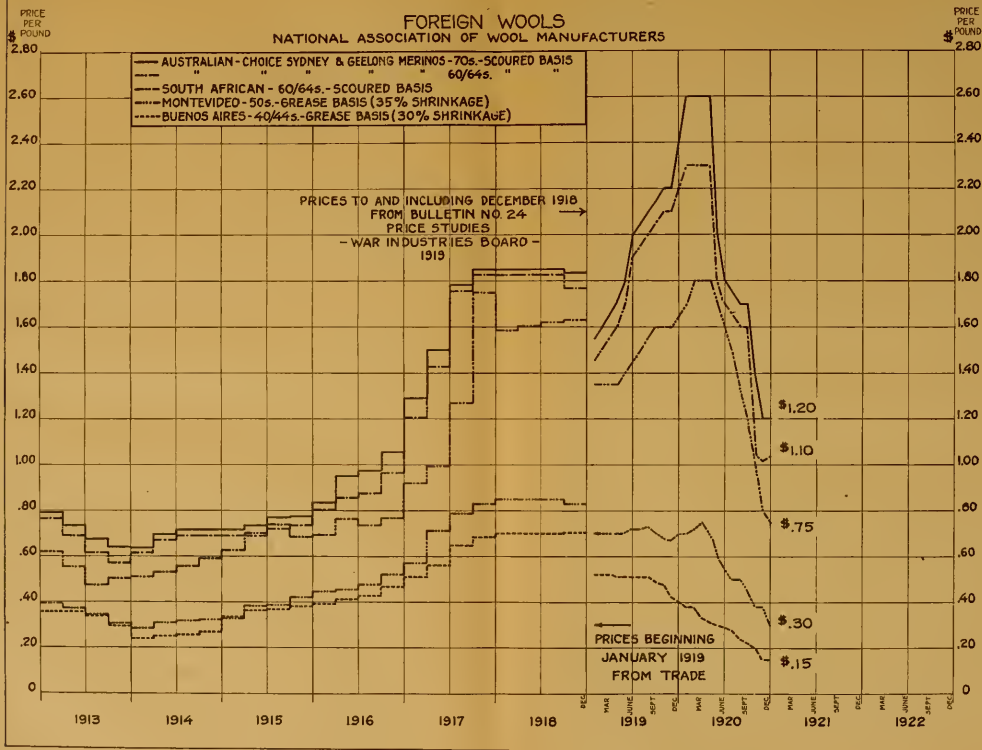
## RECEIPTS OF WOOL IN BOSTON, 1917-1920.

*(Boston Chamber of Commerce, James A. McKibben, Secretary.)*

	1917.				1918.				1919.				1920.			
	Domestic.		Foreign.		Domestic.		Foreign.		Domestic.		Foreign.		Domestic.		Foreign.	
	Bales and Bags.	Bales.	Bales.	Pounds.	Bales and Bags.	Pounds.	Bales.	Pounds.	Bales and Bags.	Pounds.	Bales.	Pounds.	Bales and Bags.	Pounds.	Bales.	Pounds.
January .....	62,780	57,130		7,152,730	40,176	43,173	52,841	37,513,919	28,547	5,277,560	29,755	15,197,289	35,871	6,715,075	20,250	9,596,920
February .....	65,306	32,866		7,031,724	43,173	43,173	28,493	23,005,853	19,837	6,416,413	23,864	9,529,708	25,957	5,667,064	20,796	13,827,550
March .....	51,818	36,502		6,039,141	36,783	38,783	38,783	28,611,959	44,732	8,545,343	37,773	14,730,721	26,712	5,544,638	20,796	30,790,710
April .....	38,208	41,446		7,831,418	41,271	7,831,418	31,206	19,668,832	50,283	10,929,195	38,132	19,797,138	22,974	4,975,511	104,194	51,691,200
May .....	55,656	25,377		9,694,508	48,854	9,694,508	68,555	40,907,368	106,155	24,759,072	22,013	12,935,874	18,894	3,928,150	27,460	11,805,900
June .....	62,710	67,784		19,626,297	76,440	19,626,297	35,843	18,253,072	112,736	32,033,988	39,492	14,115,196	43,909	13,076,930	18,109	10,055,800
July .....	144,186	12,692		52,946,176	187,359	52,946,176	34,579	17,526,932	189,117	60,854,474	67,415	39,941,779	50,736	15,923,700	11,745	7,701,400
August .....	153,505	27,846		38,930,712	139,331	38,930,712	20,436	8,345,260	117,423	30,804,081	68,779	35,543,408	67,558	21,911,575	9,570	6,674,936
September .....	84,989	33,062		13,755,971	52,618	13,755,971	51,711	27,715,595	55,426	14,711,350	56,912	37,836,505	39,910	12,007,500	9,722	8,203,300
October .....	81,185	33,456		8,546,197	39,379	8,546,197	45,076	27,861,735	45,750	9,553,445	23,880	15,342,500	27,780	6,698,600	2,318	1,369,100
November .....	64,212	14,658		5,924,021	25,798	5,924,021	82,203	37,643,631	42,658	8,825,900	28,917	15,443,600	16,931	4,550,702	11,816	8,838,500
December .....	53,099	102,647		6,617,813	42,403	6,617,813	55,492	25,126,289	48,061	11,194,114	89,724	36,698,600	22,430	5,242,000	11,746	7,901,400
Total .....	920,654	465,466		.....	813,583	.....	545,218	.....	860,735	.....	526,156	.....	365,714	.....	302,361	.....
Weight in pounds ...	210,124,902	282,297,064		183,296,708	.....	.....	.....	320,180,422	.....	213,904,935	.....	265,112,318	.....	105,706,601	.....	168,356,516

# FOREIGN WOOLS

## NATIONAL ASSOCIATION OF WOOL MANUFACTURERS





SHIPMENTS OF WOOL FROM BOSTON BY MONTHS (POUNDS).  
(*Boston Chamber of Commerce, James A. McKibben, Secretary.*)

1920.												
RAILROADS.												
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total for Year.
Boston & Albany R.R.:												
4,494,000	2,137,000	3,700,500	6,166,000	5,269,000	2,107,000	2,512,000	2,638,350	2,345,000	2,071,000	2,987,000	3,093,000	39,519,550
2,034,000	629,000	2,320,100	2,062,000	2,489,000	1,057,000	1,010,000	1,275,300	957,000	861,000	669,000	123,000	15,506,400
Grand Junction New York, New Haven & Hartford R.R.:												
6,353,000	2,430,000	5,847,000	9,293,000	7,579,000	6,955,000	5,477,000	6,640,000	5,945,000	1,591,000	1,724,000	2,136,000	63,022,000
Boston & Maine R.R.:												
867,000	1,223,000	1,463,300	2,522,000	2,470,000	224,000	264,000	223,300	206,000	161,000	48,000	276,000	9,947,600
524,000	91,000	323,000	907,000	549,000	247,000	.....	.....	207,000	385,000	62,000	.....	3,295,000
470,000	392,000	209,000	.....	642,000	2,012,000	193,000	587,400	309,000	633,000	1,700	165,000	6,749,000
Total each month,												
14,757,000	6,957,000	13,862,900	20,952,000	18,998,000	12,602,000	9,456,000	11,364,350	9,969,000	5,702,000	5,627,000	5,783,000	136,040,250
Total after January 1 . . . .												
14,757,000	21,714,000	35,576,900	56,528,900	75,526,900	88,128,900	97,584,900	108,940,250	118,918,250	124,620,250	130,247,250	136,040,250	136,040,250
Total after January 1, preceding year . . . .												
8,322,170	15,693,627	25,477,427	39,227,977	58,763,377	70,027,477	83,227,327	91,790,827	103,843,227	120,280,027	134,593,527	149,646,027	149,646,027

WOOL IMPORTED INTO BOSTON, NEW YORK, AND PHILADELPHIA.  
BY PRINCIPAL COUNTRIES OF PRODUCTION.

YEAR ENDED JUNE 30.	Russia.		Turkey.		United Kingdom.		Argentina.		Uruguay.		Chinese Empire.		British E. Indies.		British Oceania.		All other Countries.		TOTAL.	
	Pounds.		Pounds.		Pounds.		Pounds.		Pounds.		Pounds.		Pounds.		Pounds.		Pounds.		Pounds.	
1896.....	13,150,509	17,987,753	14,229,068	32,281,341	9,048,350	26,084,232	9,897,531	72,995,090	30,264,448	225,938,352										
1897.....	19,706,449	20,239,717	27,759,419	64,969,556	15,004,257	21,461,478	10,989,980	109,912,851	42,451,335	332,495,042										
1898.....	16,999,224	9,282,762	12,434,332	16,734,279	1,309,974	20,369,294	6,445,063	31,877,252	14,630,832	130,083,012										
1899.....	13,373,350	5,697,377	9,156,624	7,957,657	149,373	14,276,124	6,949,491	7,249,740	10,688,700	75,498,636										
1900.....	18,869,282	9,577,147	20,393,063	20,064,279	1,072,307	30,998,289	9,397,020	23,121,394	19,171,121	152,663,872										
1901.....	13,720,814	8,355,941	16,919,793	14,358,218	783,075	9,181,105	4,146,698	22,570,030	11,482,847	101,518,521										
1902.....	16,322,231	12,215,316	21,737,509	45,287,370	533,634	18,843,396	6,813,401	26,559,531	13,930,722	162,244,110										
1903.....	19,455,392	15,440,933	31,778,842	23,265,309	541,384	26,032,976	11,880,446	25,238,498	18,390,678	171,994,458										
1904.....	23,403,797	17,742,473	26,807,042	28,168,060	112,208	24,912,491	10,858,566	25,792,098	13,374,315	170,401,040										
1905.....	23,790,451	23,454,937	25,213,450	47,695,567	7,740,309	30,023,157	12,292,135	56,212,733	16,460,214	242,792,953										
1906.....	21,180,755	16,032,199	21,615,963	42,167,927	5,807,190	30,233,762	6,011,319	39,548,551	11,242,388	193,840,054										
1907.....	21,231,378	15,710,735	14,863,620	23,195,208	5,856,611	39,762,115	8,637,581	52,538,582	12,338,352	194,194,182										
1908.....	12,913,964	10,686,993	15,747,766	16,221,285	1,604,221	21,717,431	4,936,421	27,032,576	7,438,644	118,298,301										
1909.....	7,966,392	10,050,199	31,125,711	58,379,834	5,808,232	35,634,909	12,952,758	79,420,778	12,189,107	253,587,920										
1910.....	13,263,175	13,521,623	37,097,134	31,082,184	8,789,785	46,599,637	16,603,135	68,199,625	15,128,955	250,285,253										
1911.....	12,944,356	9,552,982	12,854,102	17,891,376	711,525	30,055,965	10,831,635	20,494,162	9,679,750	125,015,853										
1912.....	20,253,067	13,682,915	13,656,409	27,621,628	3,216,988	32,636,950	15,725,299	38,494,677	11,938,839	177,226,772										
1913.....	24,695,118	15,457,035	19,330,440	26,742,584	3,718,873	35,572,181	10,212,091	31,852,863	12,680,536	180,261,721										
1914.....	22,845,353	10,357,809	22,023,698	42,276,542	13,017,718	30,077,858	14,149,719	64,697,584	14,141,199	236,080,682										
1915.....	2,290,408	4,729,540	16,446,538	77,808,041	16,597,623	36,717,754	2,120,343	75,865,711	40,981,966	273,557,924										
1916.....	3,309,879	331,191	23,326,562	129,163,383	9,508,756	47,435,467	11,506,144	121,362,557	*101,579,848	448,494,434										
1917.....	.....	9,889	2,314,578	207,970,092	37,601,961	30,471,413	449,848	1,772,257	*102,551,513	350,108,467										
1918.....	3,124,493	.....	138,605	181,154,575	18,409,011	26,879,744	53,557	32,366,894	*92,777,054	354,903,933										
1919.....	1,582,633	128,548	2,038,532	139,451,795	41,107,665	40,243,343	4,919,916	93,032,750	*59,666,460	422,414,985										
1920.....	14,889,760	9,543,322	13,978,974	139,601,543	47,178,558	32,161,364	8,640,759	75,808,632	*95,775,126	427,578,038										

\* 78,430,380 pounds of wool included in "All other Countries" came from British South Africa in 1916, 31,970,422 pounds in 1917, 61,027,252 pounds in 1918, 57,565,601 pounds in 1919, and 49,835,777 pounds in 1920.

<sup>1</sup> The figures for 1919 and 1920 include the imports into all ports, a change in the method of reporting these imports by the Department of Commerce making it impossible to report the three ports separately. In 1920, 96 per cent of the total quantity of wool imported into the United States came through these three ports.

WOOL IMPORTED INTO BOSTON, NEW YORK, AND PHILADELPHIA.  
BY PORTS AND CLASSES.

*Mohair, Alpaca, and similar hairs are included with Class II. wools.*

GROSS IMPORTS YEAR ENDED JUNE 30.	BOSTON.			NEW YORK.			PHILADELPHIA.			TOTAL FOR THREE PORTS.
	Class I.		Class II.	Class III.		Class I.		Class II.	Class III.	
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	
1896.....	78,398,112	9,539,881	30,325,673	28,939,693	543,352	52,764,614	8,301,279	2,070,608	15,055,110	225,938,322
1897.....	137,221,457	23,156,843	33,421,729	48,428,014	2,371,604	62,522,561	9,884,925	1,811,398	13,676,511	332,493,042
1898.....	36,205,712	2,672,113	22,823,137	5,865,916	458,732	50,071,999	2,306,013	17,305	9,661,885	130,083,012
1899.....	8,335,942	1,554,556	12,456,404	2,911,683	155,121	43,251,114	1,517,560	344,368	4,971,888	75,498,636
1900.....	30,192,843	5,343,455	29,333,226	3,561,996	1,275,008	61,922,600	3,281,782	3,266,758	14,486,204	152,663,872
1901.....	22,416,924	3,396,580	19,963,032	5,602,497	920,782	39,112,400	2,072,551	572,304	8,171,451	101,518,521
1902.....	51,479,822	2,820,800	21,778,976	7,308,817	210,301	52,417,988	5,468,922	266,807	19,780,677	162,243,110
1903.....	30,601,779	8,877,714	35,294,573	5,323,738	1,693,694	54,119,001	4,443,990	1,991,395	29,648,574	171,994,458
1904.....	37,821,884	8,980,496	37,984,908	3,070,482	1,389,643	48,582,335	4,509,591	362,262	27,699,439	170,401,040
1905.....	86,741,441	19,018,797	37,070,260	9,908,856	2,908,801	44,082,025	11,146,872	1,569,526	30,748,375	242,792,953
1906.....	64,801,760	8,336,094	22,420,950	8,555,810	1,657,970	49,278,261	10,227,347	1,772,888	26,788,974	193,840,054
1907.....	61,116,729	4,204,964	25,713,122	8,817,037	1,159,185	61,357,911	8,744,454	459,275	16,647,519	118,298,301
1908.....	34,002,148	7,247,799	13,023,020	3,397,855	522,524	36,778,123	6,220,038	1,852,418	24,005,573	253,587,920
1909.....	114,512,293	11,591,627	24,757,185	11,100,437	383,908	52,853,241	12,531,238	4,635,818	26,762,386	250,285,253
1910.....	79,232,943	17,022,966	27,476,785	14,399,419	1,574,625	66,098,923	13,081,388	2,205,818	531,663	125,015,853
1911.....	32,689,348	5,532,189	20,117,152	1,327,443	252,927	43,540,674	6,878,019	1,162,021	22,660,591	177,226,772
1912.....	54,443,667	5,840,571	25,538,651	4,189,259	473,126	56,040,867	6,483,156	2,575,977	24,667,461	180,261,721
1913.....	50,887,889	8,468,552	27,131,377	3,652,043	692,695	55,702,561	6,488,156	1,094,239	23,199,709	236,080,682
1914.....	100,371,290	8,630,104	23,809,154	11,409,227	2,863,728	53,845,615	9,364,414	1,097,321	4,715,701	273,557,924
1915.....	161,405,006	8,934,849	7,926,024	26,414,800	1,849,884	52,391,984	8,822,355	702,755	9,223,693	448,494,434
1916.....	230,947,637	10,152,641	12,916,602	76,740,485	6,389,584	86,270,319	15,141,718	105,817	6,433,244	350,108,467
1917.....	207,692,666	8,335,661	1,743,571	53,586,228	7,874,856	59,316,623	2,390,910	21,343	6,107,587	354,903,933
1918.....	247,214,072	2,549,498	3,785,855	38,460,632	4,165,675	48,808,361	1,263,216	93,467	13,279,813	408,635,035
1919.....	223,758,791	7,281,606	3,705,012	60,613,838	2,527,114	66,112,178	1,263,216	699,179	8,857,037	410,600,783
1920.....	250,346,641	7,828,275	7,444,971	67,283,148	8,987,784	55,808,941	3,270,887			

NOTE. — These figures represent about 96 per cent of the total quantity of wool imported into all the ports of the United States. In 1920 the total imports at all ports were, Class I., 337,212,109; Class II., 9,956,344; Mohair, etc., 8,183,837; Class III., 73,225,748; Total, 427,578,038 pounds.



## IMPORTS OF WOOL BY PORTS AND CLASSES.

These tables show the gross imports of wool brought into the three principal wool importing centers by classes and ports, but as stated in the footnote there is a very considerable quantity of wool imported each year into minor ports. The tables show an increase of 5,163,053 pounds of all classes of wool imported in the fiscal year 1920 over the fiscal year 1919. Boston retains her supremacy in the importation of Class I wools, receiving 250,346,641 pounds, against 67,283,148 pounds at New York, and 3,270,887 pounds at Philadelphia. The importation of Class III wools into New York decreased 11,303,237 pounds, from 66,112,178 pounds in 1919 to 55,808,941 pounds in 1920. They were 40,506,933 pounds more than the receipts of similar wools in Boston and Philadelphia combined. The total importation of such wools into the three ports was 72,225,748, and of all wools, including mohair, 427,578,038.

## WOOL IMPORTED INTO BOSTON, ETC., BY PORTS AND CLASSES.

## BOSTON:

Class I .....	250,346,641
“ II .....	7,828,275
“ III .....	7,444,971

## NEW YORK:

Class I .....	67,283,148
“ II .....	8,987,784
“ III .....	55,808,941

## PHILADELPHIA:

Class I .....	3,270,887
“ II .....	699,169
“ III .....	8,857,037

Total .....	410,600,783
-------------	-------------

*Note:* These figures represent 96 per cent of the total quantity of wool imported into all the ports of the United States.

In 1920, fiscal year, the imports at all ports were:

Class I .....	337,212,109
“ II .....	9,956,344
Mohair .....	8,183,837
Class III .....	72,225,748
Total .....	427,578,038

In the upper table the imports of Mohair are included with Class II wools.



## COUNTRIES OF PRODUCTION AND IMMEDIATE SHIPMENT.

The countries of production and immediate shipment of wools imported into the United States during the fiscal year ended June 30, 1920, and the quantity of wool from each are shown in the following table which is compiled from the "Monthly Summaries" of the Department of Commerce.

WOOL IMPORTED INTO THE UNITED STATES DURING THE FISCAL YEAR ENDED  
JUNE 30, 1920, BY COUNTRIES OF PRODUCTION, IMMEDIATE SHIPMENT, AND  
CLASSES.

*Compiled from Reports of United States Bureau of Foreign and Domestic Commerce.*

COUNTRIES OF PRODUCTION.	Countries of Immediate Shipment.	Class I.	Class II.	Mohair, Alpaca, etc.	Class III.	TOTAL.
		Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
<b>EUROPE:</b>						
Iceland and Faroe Islands,	Iceland and Faroe Islands . . . . .				426,633	426,633
	Denmark . . . . .				242	242
France . . . . .	France . . . . .	311,667	10,186		90,155	412,008
Greece . . . . .	Greece . . . . .	24,161			616,893	641,054
Italy . . . . .	Italy . . . . .	20,606			118,347	138,953
Malta, Gozo, and Cyprus Islands,	England . . . . .				124,622	124,622
Portugal . . . . .	Portugal . . . . .	30				30
	Russia in Europe . . . . .	183,300			734,800	918,100
Russia in Europe,	France . . . . .	70,941			153,568	224,509
	England . . . . .	132,561			11,930	144,491
Spain . . . . .	Spain . . . . .	379,654	22,046		776,681	1,178,381
	France . . . . .				296,888	296,888
	England . . . . .				21,318	21,318
	England . . . . .	34,000		205,373	60,825	300,198
Turkey in Europe,	Greece . . . . .				154,548	154,548
	France . . . . .	119,802				119,802
	Turkey in Europe . . . . .	318,326		2,475,186	4,071,899	6,865,411
United Kingdom:						
	England . . . . .	1,659,297	2,924,143	147,033	930,378	5,660,851
England . . . . .	Canada . . . . .	40,197				40,197
	Scotland . . . . .				12,428	12,428
Scotland . . . . .	Scotland . . . . .	462,585			5,669,546	6,132,131
	England . . . . .	280,348	323,691		1,345,984	1,950,023
Ireland . . . . .	England . . . . .	11,932	200,212			212,144
	Ireland . . . . .		1,200			1,200
Total . . . . .		4,049,407	3,481,478	2,827,592	15,617,985	25,976,462
<b>ASIA:</b>						
Aden . . . . .	Aden . . . . .				4,512	4,512
British India . . . . .	England . . . . .	42,085	4,419		1,998,566	2,045,010
	British India . . . . .	14,925			212,805	227,730
British E. Indies, British India . . . . .	England . . . . .	100,185	48,500	12,047	2,859,094	3,019,826
	British E. Indies—British India . . . . .				3,001	3,001
East Indies: British . . . . .	England . . . . .	29,803	94,558		1,444,004	1,568,365
East Indies: British India . . . . .	England . . . . .	175,581			1,396,530	1,572,111
	British India . . . . .	680			45,160	45,840
East Indies: Other British Hongkong . . . . .	England . . . . .	33,391			125,485	158,876
	Hongkong . . . . .	10				10
China . . . . .	China . . . . .	5,468,746	1,649,591	452,025	3,690,642	31,261,004
	England . . . . .	92,171	431,435	34,249	335,019	892,874
	Canada . . . . .				1,786	1,786
	Japan . . . . .				6,000	6,000
Persia . . . . .	England . . . . .	331			832,966	833,297

WOOL IMPORTED INTO THE UNITED STATES, ETC. — *Continued.*

COUNTRIES OF PRODUCTION.	Countries of Immediate Shipment.	Class I.	Class II.	Mohair, Alpaca, & etc.	Class III.	TOTAL.
<i>ASIA — Continued:</i>		<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
	{ Canada . . . . .				72,400	72,400
Russia in Asia . . . . .	{ Russia in Asia . . . . .	664,540	14,436		2,535,999	3,214,975
	{ England . . . . .				91,124	91,124
	{ Japan . . . . .				84,346	84,346
	{ Turkey in Asia . . . . .				139,515	139,515
Turkey in Asia . . . . .	{ Turkey in Asia . . . . .	140,216			3,950,387	4,090,603
	{ France . . . . .	25,283		9,039	144,722	179,044
	{ England . . . . .	75,450	25,610	111,148	318,425	520,633
	{ Turkey in Europe . . . . .				96,595	96,595
Total . . . . .		6,863,397	2,268,549	618,508	40,389,923	50,139,477
<i>AFRICA:</i>						
	{ England . . . . .	4,002,837		163,362	19,641	4,185,840
British S. Africa, . . . . .	{ British S. Africa . . . . .	41,115,301	106,298	2,107,066	1,494,213	44,822,878
	{ Canada . . . . .	93,075				93,075
	{ France . . . . .	61,325				61,325
	{ Belgium . . . . .	293,902			176,901	469,903
	{ Egypt . . . . .				2,756	2,756
Egypt . . . . .	{ Egypt . . . . .	38,663			109,258	147,921
	{ Turkey in Asia . . . . .				665	665
French Africa . . . . .	{ France . . . . .	11,535				11,535
	{ French Africa . . . . .				5,910	5,910
	{ England . . . . .				290	290
Italian Africa . . . . .	{ Italian Africa . . . . .	608				608
Portuguese Africa . . . . .	{ Portuguese Africa, . . . . .	700				700
Total . . . . .		45,617,946	106,298	2,270,423	1,808,734	49,803,406
<i>NORTH AMERICA:</i>						
Canada . . . . .	Canada . . . . .	8,754,473	233,185	1,894	10,565	9,000,117
Mexico . . . . .	Mexico . . . . .	2,098		41,943	1,600	45,641
Newfoundland and Labrador, . . . . .	Newfoundland and Labrador . . . . .	1,602	17,000		19,048	37,650
Total . . . . .		8,758,173	250,185	43,837	31,213	9,053,408
<i>CENTRAL AMERICA:</i>						
British Honduras, . . . . .	British Honduras . . . . .	112	6,000		112	6,224
Guatemala . . . . .	{ Guatemala . . . . .	27,416			44,692	72,108
	{ Costa Rica . . . . .				10,734	10,734
Total . . . . .		27,528	6,000		55,538	89,066
<i>SOUTH AMERICA:</i>						
	{ England . . . . .	335,845				335,845
	{ France . . . . .	39,778				39,778
Argentina . . . . .	{ Argentina . . . . .	124,610,997	2,348,288		7,107,578	134,066,863
	{ Chile . . . . .	523,022				523,022
	{ Canada . . . . .	38,474				38,474
	{ Belgium . . . . .	146,640				146,640
	{ Uruguay . . . . .	4,450,921				4,450,921
Bolivia . . . . .	{ Bolivia . . . . .	205,766		52,788	123,404	381,958
Brazil . . . . .	{ Brazil . . . . .	318,589			9,772	328,361
	{ England . . . . .				22,876	22,876
Chile . . . . .	{ Chile . . . . .	17,514,182	655,493	187,909	4,434,293	22,791,877
	{ England . . . . .	93,795			87,660	181,355
	{ Panama . . . . .	17,150		2,980	4,749	24,879
Colombia . . . . .	{ Colombia . . . . .				3,329	3,329
Ecuador . . . . .	{ Ecuador . . . . .	95,810			346,934	442,744
	{ Peru . . . . .	2,220,323	41,483	1,808,647	612,425	4,682,878
	{ Bolivia . . . . .	16,782		10,747		27,529
Peru . . . . .	{ England . . . . .	189,363		357,351	138,829	685,543
	{ Panama . . . . .	148,600		180	9,820	158,600
	{ Nicaragua . . . . .				20,770	20,770
	{ Uruguay . . . . .	44,396,605	697,969	508	1,169,084	46,264,166
	{ France . . . . .	28,791				28,791
Uruguay . . . . .	{ Belgium . . . . .	33,232				33,232
	{ Argentina . . . . .	464,119				464,119
	{ England . . . . .	388,250				388,250
Venezuela . . . . .	{ Venezuela . . . . .				129,317	129,317
Total . . . . .		196,277,034	3,743,233	2,421,110	14,220,740	216,662,117

WOOL IMPORTED INTO THE UNITED STATES, ETC. — *Concluded.*

COUNTRIES OF PRODUCTION.	Countries of Immediate Shipment.	Class I.	Class II.	Mohair, Alpaca, etc.	Class III.	TOTAL.
AUSTRALASIA :		<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
	{ England . . . . .	18,018,248	5,764		86,700	18,110,712
	{ Canada . . . . .	103,835				103,835
Australia . . . . .	{ France . . . . .	42,278				42,278
	{ Belgium . . . . .	924,404				924,404
	{ British India . . . . .	17,065				17,065
	{ Australia . . . . .	46,920,259		2,362		46,922,621
New Zealand . . . . .	{ New Zealand . . . . .	1,488,677				1,488,677
	{ England . . . . .	8,094,887	94,837		345	8,190,069
	{ Spain . . . . .	6,968				6,968
Total . . . . .		75,618,624	100,601	2,362	87,045	75,808,632
SUNDRY ISLANDS :						
Dutch E. Indies,	{ Dutch East Indies,				210	210
Dutch W. Indies,	{ Dutch West Indies,				7,770	7,770
	{ Dutch Guiana . . . . .				7,490	7,490
Total . . . . .					15,470	15,470
Grand Totals,		337,212,109	9,956,844	8,183,837	72,225,748	427,578,038

## IMPORTS BY GRAND DIVISIONS, FISCAL YEAR ENDED JUNE 30, 1920.

PLACES OF PRODUCTION.	Class I.	Class II.	Mohair, Alpaca, etc.	Class III.	TOTAL.
Europe . . . . .	4,049,407	3,481,478	2,827,592	15,617,985	25,976,462
Asia . . . . .	6,863,397	2,268,549	618,508	40,389,023	50,139,477
Africa . . . . .	45,617,946	106,298	2,270,428	1,808,734	49,803,406
North America . . . . .	8,758,173	250,185	43,837	31,213	9,083,408
Central America . . . . .	27,528	6,000		55,338	89,066
South America . . . . .	196,277,084	3,743,233	2,421,110	14,220,740	216,662,117
Australasia . . . . .	75,618,624	100,601	2,362	87,045	75,808,632
Islands . . . . .				15,470	15,470
Totals . . . . .	337,212,109	9,956,844	8,183,837	72,225,748	427,578,038

The corresponding figures for the preceding year were :

## IMPORTS BY GRAND DIVISIONS, FISCAL YEAR ENDED JUNE 30, 1919.

PLACES OF PRODUCTION.	Class I.	Class II.	Mohair, Alpaca, etc.	Class III.	TOTAL.
Europe . . . . .	1,801,397		84,715	4,337,312	6,223,424
Asia . . . . .	11,584,941	717,486	359,254	33,548,421	46,210,102
Africa . . . . .	47,982,753	37,528	6,364,111	3,230,507	57,614,899
North America . . . . .	6,987,653	425,784	6,152	28,752	7,448,341
Central America . . . . .	36,914			372,076	408,990
South America . . . . .	166,559,577	1,202,753	1,062,062	42,599,467	211,423,859
Australasia . . . . .	92,991,382		31,798	9,570	93,032,750
Islands . . . . .	270			52,350	52,620
Totals . . . . .	327,944,887	2,383,551	7,908,092	84,178,455	422,414,985

## IMPORTS OF CLASS I WOOLS.

The imports of Class I wools into the three ports were 319,359,510 pounds, or 3,723,665 pounds more than those of the fiscal year 1919, which were 315,635,845 pounds. The following table covers the last four years and shows the amount of such wools coming into this country from each of the principal countries of production :

	1920.	1919.	1918.	1917.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Australasia .....	75,618,624	92,991,382	32,366,733	1,772,257
Argentina .....	129,770,054	121,519,497	161,089,148	185,446,149
Uruguay .....	45,310,997	34,386,870	17,488,372	34,710,261
British South Africa .	41,463,603	47,967,223	55,745,777	23,552,260
All other .....	45,048,831	18,770,873	22,775,584	20,817,768
	337,212,109	315,635,845	289,465,614	266,298,695

## IMPORTS OF CLASS II WOOLS.

Into the three principal ports, Boston, New York, and Philadelphia, were imported in the fiscal year 1920, 9,956,344 pounds of Class II wools, not including mohair, alpaca, etc. The countries from which the chief imports came are shown by the following table :

## IMPORTS OF CLASS II WOOLS, FISCAL YEAR 1920.

	<i>Pounds.</i>		<i>Pounds.</i>
China .....	2,081,026	Argentina .....	2,348,288
United Kingdom .....	3,449,246	Peru .....	41,483
Canada .....	233,185	British South Africa .....	106,298
		Total .....	8,259,526

*Imports of Mohair, Alpaca, etc.*

The imports of mohair rose slightly over those for 1919, advancing from 7,908,092 to 8,183,837 in 1920. The imports from Europe jumped from 84,715 pounds in 1919 to 2,827,592 pounds in 1920, Spain sending 205,373 pounds, England 147,033 pounds, and Turkey in Europe 2,475,186 pounds. South America sent 2,421,110 pounds, an increase of 1,359,048 pounds over the total for 1919. South Africa sent 2,270,428 pounds, dropping from 6,364,111 pounds in 1919. China furnished 507,174

pounds. Of the total from South America Peru sent 1,808,647, or three-fourths of the imports from that continent, and nearly double the quantity she sent in the previous year. Chile sent 190,889 pounds.

Unlike other wools, which under the present tariff law are free of duty, mohair and similar hairs are subject to a duty of 15 per cent.

## IMPORTS OF CLASS III WOOLS.

Class III wools come from nearly every portion of the globe, but principally from the countries named in the subjoined table, which covers the imports of the last three years. These wools are mostly used for the manufacture of carpets and low-grade blankets. The imports of these wools decreased 11,952,707 pounds as compared with the imports of 1919. The shipments from China decreased 5,190,646 pounds; from Iceland, 550,205 pounds; from South Africa, 1,537,896 pounds; from Argentina, 9,583,365 pounds; from Uruguay, 5,551,747 pounds; from Peru, 466,322 pounds; from Chile, 11,599,298 pounds; from Ecuador, 413,803 pounds. The following increases occurred: Russia, 3,708,974 pounds; United Kingdom, 6,080,910 pounds; Turkey, 8,754,456 pounds; British East Indies, 4,285,397 pounds; Spain, 893,097 pounds, and all other 1,230,579 pounds.

	1920.	1919.	1918.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Chinese Empire .....	24,033,447	29,224,093	24,029,667
Russia (Europe and Asia)...	3,823,982	115,008	3,086,585
United Kingdom.....	7,958,336	1,877,420	138,367
Turkey (Europe and Asia) ..	8,797,401	42,945	.....
British East Indies .....	8,084,585	3,799,188	41,309
France .....	90,155	329	.....
Spain .....	1,094,887	201,790	674,452
Iceland .....	426,875	1,977,080	729,990
British South Africa.....	1,692,611	3,230,507	4,521,876
Argentina.....	7,107,578	16,690,943	15,269,279
Uruguay.....	1,169,084	6,720,795	830,256
Peru .....	781,844	2,248,666	3,119,446
Chile .....	4,526,602	16,125,900	5,231,980
Ecuador .....	346,934	760,747	674,814
All other .....	2,291,427	1,163,044	353,782
	72,225,748	84,178,455	58,701,803

The following table gives the total gross imports into the United States for fifteen fiscal years :

## GROSS IMPORTS OF WOOL, FISCAL YEARS 1906-1920 — POUNDS.

	Class I.	Class II *	Class III.	Total.
1906.....	86,810,307	15,204,254	99,674,107	201,688,668
1907.....	82,982,116	10,671,378	110,194,051	203,847,545
1908.....	45,798,313	13,332,540	66,849,681	125,980,524
1909.....	142,580,993	21,952,259	101,876,052	266,409,304
1910.....	111,604,330	31,614,235	120,721,019	263,939,584
1911.....	40,104,845	12,456,468	85,086,328	137,647,641
1912.....	71,203,329	15,557,664	106,639,720	193,400,713
1913.....	67,238,715	16,886,446	111,168,094	195,293,255
1914.....	125,088,761	20,556,795	102,003,313	247,648,869
1915.....	222,017,420	20,356,212	65,709,752	308,083,429
1916.....	403,121,585	22,437,438	109,268,999	534,828,022
1917.....	279,481,501	25,218,046	67,672,671	372,372,218
1918.....	303,868,940	16,266,332	58,994,662	379,129,934
1919.....	327,944,887	10,291,643	84,178,455	422,414,985
1920... ..	337,212,109	18,140,181	72,225,748	427,578,038

\* Includes mohair, etc.

## IMPORTS OF WOOL MANUFACTURES.

The gross imports of wool manufactures for the fiscal year show a foreign value of \$43,537,552 which is \$30,258,072 more than the value of similar imports for the preceding fiscal year. They reflect in a measure the progress Great Britain, France, and Belgium have made toward a normal condition and indicate what kind of competition is to be expected in the years in the immediate future. The values are foreign and cannot properly be compared with the value of home manufactures unless the customs duties levied are added.



## IMPORTS OF WOOL MANUFACTURES, 1914-1920. (FOREIGN VALUE.)

	1914.		1915.		1916.		1917.		1918.		1919.		1920.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
GROSS IMPORTS, YEARS ENDED JUNE 30.														
Carpets and rugs, woven whole (sq. yds.) . . . . .	1,073,877	\$4,452,309	1,059,172	\$2,947,057	733,458	\$2,371,351	659,807	\$3,024,610	473,604	\$2,247,128	165,996	\$962,297	840,808	\$7,203,097
All other (sq. yds.) .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	297,101	767,232	166,687	614,304	78,286	303,468	258,324	992,091
Clothing, etc., except shawls and knit goods . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Cloth, pounds . . .	12,385,686	12,794,048	10,648,990	10,262,732	6,117,908	6,479,063	6,055,032	7,494,082	2,630,882	4,619,498	1,561,993	3,493,168	5,095,182	12,858,518
“ square yards .	. . . . .	. . . . .	17,129,292	. . . . .	8,880,828	. . . . .	8,212,495	. . . . .	3,864,145	. . . . .	2,322,846	. . . . .	7,727,579	. . . . .
Dress goods, pounds,	14,521,451	4,396,660	8,000,010	. . . . .	1,691,259	1,805,880	3,329,425	1,183,472	572,305	987,825	325,896	770,973	1,064,387	2,790,371
“ “ sq. yds.,	29,442,047	2,376,549	29,542,723	. . . . .	6,914,313	. . . . .	826,122	. . . . .	2,378,719	. . . . .	1,261,365	. . . . .	3,403,694	. . . . .
Manufactures of mo- hair, etc. . . . .	. . . . .	1,448,898	. . . . .	2,243,660	. . . . .	1,673,029	. . . . .	1,885,216	. . . . .	944,704	191,230	381,406	366,168	839,634
Tops . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	482,183	251,812	5,853	5,913	. . . . .	101,422	22,388	26,655	1,408,462	1,800,491
Yarns . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	110,477	88,086	38,374	55,406	489,007	1,165,895	507,767	972,858	2,092,251	4,488,098
Wool wastes . . . .	56,530,487	3978,709	. . . . .	834,864	. . . . .	1,207,517	. . . . .	1,608,333	. . . . .	1,392,843	. . . . .	1,233,422	8,152,845	6,120,540
All other . . . . .	. . . . .	5,578,906	. . . . .	4,381,785	. . . . .	653,263	. . . . .	1,069,405	. . . . .	6,680,883	. . . . .	708,265	. . . . .	2,122,077
Total . . . . .	. . . . .	34,264,204	. . . . .	29,791,356	. . . . .	15,657,537	. . . . .	18,862,463	. . . . .	27,476,798	. . . . .	18,279,481	. . . . .	43,498,504

<sup>3</sup> Since November 30, 1913.<sup>2</sup> July to December, 1913, inclusive.<sup>1</sup> January to June, 1914, inclusive.



IMPORTS OF WOOL AND MANUFACTURES OF WOOL ENTERED  
FOR CONSUMPTION.

The imports of wool entered for consumption for the fiscal years ended June 30, 1919 and 1920, are as follows:

## IMPORTS OF WOOL ENTERED FOR CONSUMPTION.

	Fiscal Years Ended June 30—			
	1920.		1919.	
	Pounds.	Value.	Pounds.	Value.
Class I .....	337,696,989	\$177,927,034	328,062,833	\$182,537,725
Class II, including mohair, alpaca, etc.	16,835,543	9,948,698	9,441,494	5,095,111
Class III .....	71,739,412	24,167,750	83,875,615	36,256,549
Total.....	426,271,944	\$212,043,482	421,379,942	\$223,889,385

The imports for consumption of the principal wool manufactures for the fiscal years compare as follows:

IMPORTS OF THE PRINCIPAL MANUFACTURES OF WOOL ENTERED FOR  
CONSUMPTION.

	1920.		1919.	
	Quantity.	Value.	Quantity.	Value.
<b>Cloths:</b>				
Worsted:				
Pounds .....	534,950	\$1,904,425	348,936	\$1,041,789
Sq. yds. ....	972,035		554,975	
Woolen:				
Pounds .....	3,843,427	9,436,961	1,215,709	2,452,593
Sq. yds. ....	5,711,720		1,788,679	
All other, Mohair, etc. (pounds) ..	317,506	819,372	212,786	415,666
Total Cloths (pounds) .....	4,695,883	\$12,160,758	1,777,431	\$3,910,048
<b>Dress Goods:</b>				
Pounds .....	996,313	\$2,590,867	339,812	\$746,603
Sq. yds. ....	3,252,377		1,202,195	
<b>Carpets (sq. yds.) .....</b>	<b>1,022,812</b>	<b>\$7,208,407</b>	<b>267,006</b>	<b>\$1,263,165</b>
<b>Yarns:</b>				
Wool (pounds) .....	1,360,702	\$3,043,050	471,075	\$875,659
Mohair, etc. (pounds) .....	533,975	1,024,863	22,030	64,408
Total Yarns .....	1,894,677	\$4,067,913	493,105	\$940,067
<b>Tops:</b>				
Wool (pounds) .....	1,002,801	\$1,277,009	22,588	\$26,655
Mohair, etc. (pounds) .....	110,878	122,670	6	38
Total Tops .....	1,113,679	\$1,399,679	22,594	\$26,693
<b>Wearing Apparel .....</b>	<b>.....</b>	<b>\$4,081,607</b>	<b>.....</b>	<b>\$4,410,904</b>
<b>All other .....</b>	<b>.....</b>	<b>\$781,782</b>	<b>.....</b>	<b>\$237,593</b>
<b>Total .....</b>	<b>.....</b>	<b>\$32,291,013</b>	<b>.....</b>	<b>\$11,535,073</b>

The total value of the imports for consumption during the fiscal year increased from \$11,535,073 in 1919 to \$32,291,013 in 1920, all items showing a very considerable increase in quantity as well as in value, except the value of wearing apparel, which was \$329,297 less in 1920 than in 1919.

The exports of domestic wool manufactures during the fiscal year were valued at \$56,223,360, as compared with \$31,191,387, revised figures, for 1919, an increase of \$25,031,973. Increases were recorded as follows: Blankets, \$174,370; cloths and dress goods, \$16,586,029; wearing apparel, \$5,478,126; woolen rags, \$305,669, and all others, \$2,487,479. The quantity of the exports of domestic wools rose from 545,663 pounds in the fiscal year 1919 to 6,880,669 pounds in 1920 and in value from \$550,764 in 1919 to \$4,658,909 in 1920. Our exports of wool manufactures have come about because of the war's effects upon the manufacturing countries of Europe. Whether they can be maintained in peace is doubtful.

Only since the passage of the Underwood-Simmons law have the imports into the United States of mutton or lamb from foreign countries been of appreciable quantities. Jumping immediately after the passage of the new law putting meats on the free list to 19,875,942 pounds in the calendar year 1914, they dropped to 2,007,601 pounds in the fiscal year 1918, doubling in 1919, but still far below the quantities of 1914, 1915, or 1916. In 1920 the imports took a sudden and very decided jump in April, continuing to October, when the total for the ten months of the year stood at 76,728,774 pounds, as compared with 7,154,238 pounds for the corresponding period of the previous year.

IMPORTS OF MUTTON AND LAMB, FISCAL YEARS 1914-1918, INCLUSIVE.

Year.	Quantity.	Value.
	<i>Pounds.</i>	<i>Dollars.</i>
1914 .....	<sup>1</sup> 12,690,920	1,112,294
1915 .....	<sup>2</sup> 19,985	2,436
1916 .....	15,528,855	1,474,422
1917 .....	20,257,999	1,784,310
1918 .....	4,684,131	555,646
1918 .....	2,007,601	267,948

<sup>1</sup> Beginning October 4, 1913.

<sup>2</sup> July 1 to October 3, 1913.

The following table shows the imports by months for the ten months of the calendar years 1919 and 1920:

IMPORTS OF MUTTON AND LAMB INTO THE UNITED STATES BY MONTHS —  
TEN MONTHS OF THE CALENDAR YEARS 1919 AND 1920.

	1919.		1920.	
	Quantity.	Value.	Quantity.	Value.
	<i>Pounds.</i>	<i>Dollars.</i>	<i>Pounds.</i>	<i>Dollars.</i>
January .....	131,764	31,966	864,561	180,599
February .....	317,597	78,490	850,243	189,405
March .....	896,762	203,072	744,174	178,075
April .....	1,780,577	346,277	2,358,858	411,252
May .....	824,905	149,431	5,253,962	539,813
June .....	4,276	860	2,033,200	282,978
July .....	244,278	39,977	5,181,526	701,227
August .....	312,263	59,716	13,956,578	1,971,726
September .....	1,597,097	203,829	18,460,700	2,186,495
October .....	1,044,719	220,118	27,024,972	3,191,632
Total .....	7,154,238	\$1,333,745	76,728,774	\$9,833,202

The following table shows by months the importation of "rags, noils, and wastes" (as listed in the Monthly Summary) into the United States, the value per month of such importations, the cumulative value, and the value for such cumulative amounts, as well as the value per pound, for the importation of the ten months of the calendar year 1920. It shows conclusively that these importations consist chiefly of noils and wastes, and not rags, which, under the proposed compulsory branding law, would be considered virgin wool.

IMPORTATION OF RAGS, NOILS, AND WASTES INTO THE UNITED STATES BY  
MONTHS, TEN MONTHS CALENDAR YEAR 1920.

	Quantity. Pounds.	Value. Dollars.	Value per Pound per Month.	Cumulative Quantity per Month. Pounds.	Cumulative Value per Month. Dollars.	Cumulative Monthly Values per Pound per Month.
January . . .	683,105	468,107	68.5 cents.	683,105	468,107	68.5 cents.
February . . .	785,680	730,288	92.9 "	1,468,785	1,198,395	81.5 "
March . . .	1,537,070	982,739	63.9 "	3,005,855	2,181,134	72.5 "
April . . .	1,079,400	644,720	59.0 "	4,085,255	2,825,904	69.1 "
May . . .	552,143	281,758	51.0 "	4,637,398	3,107,662	67.0 "
June . . .	465,744	168,119	36.0 "	5,103,142	3,275,781	63.7 "
July . . .	398,236	171,686	43.3 "	5,501,378	3,447,467	62.6 "
August . . .	858,068	481,195	56.0 "	6,359,446	3,928,662	61.7 "
September . .	167,680	59,981	35.7 "	6,527,126	3,988,543	61.1 "
October . . .	251,581	106,715	42.4 "	6,778,707	4,095,358	60.4 "
Total . . .	6,778,707	\$4,095,358	. . . . .	6,778,707	\$4,095,358	60.4 cents.

The following table shows the same facts for the importation of "rags, wastes, and noils" for the fiscal year ended June 30, 1920. It shows a higher average value per pound than for the ten months of the calendar year, due to the higher price prevailing during the fiscal year for wool and its by-products:

IMPORTATION OF RAGS, NOILS, AND WASTES INTO THE UNITED STATES BY MONTHS, FOR THE FISCAL YEAR ENDED JUNE 30, 1920.

	Quantity. Pounds.	Value. Dollars.	Value per Pound per Month.	Cumulative Quantity per Month. Pounds.	Cumulative Value per Month. Dollars.	Cumulative Value per Pound per Month.
July, 1919	749,371	683,734	91.2 cents.	749,371	683,734	91.2 cents.
August, "	402,477	306,974	91.2 "	1,151,848	990,708	86.0 "
September, "	649,760	648,239	99.9 "	1,801,608	1,638,947	90.7 "
October, "	404,433	481,528	71.2 "	2,206,041	2,120,475	96.1 "
November, "	368,568	428,238	1.1 "	2,574,609	2,548,713	98.9 "
December, "	474,594	296,046	61.9 "	3,049,203	2,844,759	93.0 "
January, 1920	683,105	468,107	68.5 "	3,732,308	3,312,866	88.7 "
February, "	785,680	730,288	92.9 "	4,517,988	4,043,154	89.4 "
March, "	1,537,070	982,739	63.9 "	6,055,058	5,025,893	83.0 "
April, "	1,079,400	644,739	59.0 "	7,134,458	5,670,632	79.9 "
May, "	552,143	281,758	51.0 "	7,686,601	5,952,390	77.5 "
June, "	465,744	168,119	36.0 "	8,152,345	6,120,509	75.0 "
Total . . .	8,152,345	\$6,120,509	. . . . .	8,152,345	\$6,120,509	75.0 cents.

Owing to peculiar conditions growing out of the war, domestic wools have been exported in small quantities for the past four fiscal years, the quantity for 1920 reaching the total of 6,890,669 pounds. It is true, nevertheless, that the best and almost the sole customers for the wools of the United States are our domestic manufacturers, whose machinery consumes year in and year out all but the smallest proportion of the domestic clip. The following table shows the exports of domestic wool for the past four fiscal years:

EXPORTS OF DOMESTIC WOOL, FISCAL YEARS 1917 TO 1920, INCLUSIVE.

Year.	Quantity.	Value.
	<i>Pounds.</i>	<i>Dollars.</i>
1917.....	2,148,350	1,230,296
1918.....	993,143	916,506
1919.....	545,663	550,764
1920.....	6,890,669	4,658,909

The following table shows the countries to which our domestic wools were exported during the fiscal year ended June 30, 1920, and the quantity sent to each country and values. Many of these countries are importers of our wools in quantity for the first time, even Japan taking 286,751 pounds.

## EXPORTS OF DOMESTIC WOOL, FISCAL YEAR ENDED JUNE 30, 1920.

Countries to which Shipped.	Quantity.	Value.
	<i>Pounds.</i>	<i>Dollars.</i>
Belgium .....	151,207	111,176
Denmark .....	58,744	27,540
France .....	10,198	6,101
Germany .....	65,238	27,678
Netherlands .....	334,379	279,314
Sweden .....	6,635	5,750
England .....	916,852	561,037
Canada .....	5,118,952	3,518,712
Panama .....	353	225
Mexico .....	28,834	15,159
Colombia .....	530	931
Venezuela .....	3,996	5,440
China .....	80,000	7,000
Japan .....	286,751	377,846
Total .....	6,990,669	\$4,943,909

## VALUE OF EXPORTS OF WOOL MANUFACTURES, CALENDAR YEARS 1913 TO 1920, INCLUSIVE.

Year.	Value.	Year.	Value.
1913 .....	\$4,589,896	1917 .....	\$17,097,279
1914 .....	12,479,542	1918 .....	19,928,071
1915 .....	42,595,210	1919 .....	47,833,061
1916 .....	37,442,690	1920 .....	56,223,360

In connection with the above table should be read the following one showing the value of the exports of wool wearing apparel which constituted a fairly large proportion of the total value of the wool manufactures exported each year. The countries to which those exports were sent are not given for the years 1913 and 1914. In 1915 the export to France, the United Kingdom, and Canada totaled \$6,664,983. The following year those to Russia in Europe, Russia in Asia, and to Canada made up all of the total except \$2,102,366. In 1917 Canada alone took \$2,397,902, or more than half of the total. In 1918 the exports to Canada, Italy, France, and Russia in Europe made

up \$2,972,032 of the entire total. In 1919 the exports to Russia in Asia and Russia in Europe, Canada, Mexico, Cuba, and Italy were nearly eight millions of the total. Those exports seem to be a phase of the war, and the readjustments following, which are not likely to continue in their present volume. The table showing the exports of wool wearing apparel is as follows:

EXPORTS OF WOOL WEARING APPAREL FROM THE UNITED STATES,  
CALENDAR YEARS 1913 TO 1920, INCLUSIVE.

Year.	Value.	Year.	Value.
1913 .....	\$2,297,171	1917 .....	\$4,076,129
1914 .....	4,676,424	1918 .....	4,239,262
1915 .....	16,267,645	1919 .....	14,665,069
1916 .....	10,515,599	1920 .....	8,160,416

The following table shows the exports of woollen rags from the United States for the fiscal years ended June 30, 1913 to 1920, inclusive. Total quantities, total values, and values per pound are given, those for the last four years showing the effect of the higher prices caused by the war for all commodities. They show an increase proportionate to the higher wool prices.

EXPORTS OF WOOLEN RAGS FROM THE UNITED STATES FOR THE FISCAL  
YEARS ENDED JUNE 30, 1913 TO 1920, INCLUSIVE, QUANTITY AND VALUE.

Year.	Quantity.	Total Value.	Value per Pound.
	<i>Pounds.</i>	<i>Dollars</i>	<i>Cents.</i>
1913 .....	27,774,332	923,184	3.3
1914 .....	26,852,402	973,653	3.6
1915 .....	24,784,622	1,388,934	5.6
1916 .....	13,918,247	1,283,281	9.2
1917 .....	13,671,472	1,629,130	11.9
1918 .....	8,532,243	1,012,350	11.8
1919 .....	21,121,145	3,653,874	17.2
1920 .....	21,020,362	3,959,543	18.8



## THE ENGLISH MARKET.

The course of the market, the factors working to bring about lower prices for wool, the failure of the shipping program, the inability of German manufacturers to secure customary supplies for their machinery, and the many problems which confronted all those engaged in handling or manufacturing wool during the year are well set forth in the following quotations. Commenting on the various sales and the salient features of the situation the Wool Chart said:

January 8, 1920:

The chief topic of interest at the moment is the opening of the London sales next Monday. . . . The withdrawal of French and Belgian representatives from the December series had a good deal to do with the substantial fall which then took place, and there is a distinct feeling here that if competition in London is left mainly to the home trade there may be further reductions. According to recent reports from France, it is the intention of many users to restrict their operations in the near future as far as possible to Continental auctions, because of the more favorable prospects of securing speedy deliveries. The serious disadvantage of the exchange has also a tendency to make French and Belgian firms buy from hand to mouth. The keen edge seems to have been taken off the American demand. . . .

Taking a longer view there can be no doubt that the whole of the supplies of merino and fine crossbred wool will be wanted this year to meet the requirements of the trade either in this country, America, or the Continent. . . . The least satisfactory part of the outlook is the extraordinary dearness of fine wools, as compared with the lower grades. . . . The facts are that machinery at the manufacturing end is employed to its utmost capacity, whilst wool is coming forward at a faster rate than it can be consumed, especially in view of the large amount of machinery destroyed or standing idle on the Continent.

So long as the world's demand for textiles has to be met by only part of the pre-war machinery, it is conceivable that values of fully manufactured, and even semi-manufactured, goods may be maintained in spite of any easier tendency that may occur in the raw material market. The rate at which the productive capacity of Continental machinery is restored to its pre-war standard is an important factor in the situation, and so far as Germany is concerned it is entirely a question of finance, the solution of which appears mainly to depend upon what help she can get from America. In France the task of repairing war-time destruction is the foremost consideration. It is stated on reliable authority that it will take two years to get to the pre-war level of production in that country, and even that is dependent upon there being a sufficient supply of coal. The probabilities are, therefore, that for the whole of this year at least there will be an abnormal demand upon British textile machinery. But British machinery can only con-



sume a part of the wool supplies coming forward. In 1913, Great Britain consumed 23 per cent of the Empire merino clip, 65 per cent of the crossbred clip, and 17 per cent of the wool produced in South America.

January 15, 1920:

What has happened in London this week has further emphasized the view that without substantial competition from the Continent, wool values are not likely to be restored to the high level of last November. The broad verdict of the sales is that fine wools are holding their own at the December level, whilst the lower qualities are still on the decline. The position of the exchange between Continental countries and England is such as to create an effective barrier against substantial competition from that quarter, and the urgency of Germany's need for raw materials is for the time being negatived by her inability to pay for them. The slowness with which wool textile machinery on the Continent, and particularly in Germany and Austria, is being brought into use is the crux of the wool situation in London. So much idle machinery has the effect of creating a surplus of raw material, and from one point of view it is a good thing that the bulk of the supplies are held by the British Government and not private traders. There is a well-maintained consumption of merino and fine crossbred tops and yarns, but medium and low crossbreds have shown a further weakening, and there will be no inclination to buy these qualities of wool in substantial quantities until existing stocks of tops and yarns have been reduced.

January 22, 1920:

The well-maintained demand in London for merino wool has had its effect upon the attitude of topmakers, and quotations for merino tops remain firm at late rates. Here and there spot lots are changing hands at rather more than quoted prices, but in most cases users are fairly well covered, and are keeping out of the market. In fine crossbreds some of the higher prices recently quoted have disappeared, and average quotations are now more in line with what topmakers have actually been making. Medium and low crossbred tops are still neglected, and although there is not much variation in quoted prices, there is no doubt that concessions could be obtained if business were offered. . . .

None of the critics of the high price of clothing appear to have any practical remedy to offer. . . . Criticism and argument does not alter the fact that a large proportion of the world's textile machinery, notably in Germany, Austria, and Poland, is unemployed because of inability to buy raw materials, and that the remaining machinery which is in operation in other parts of the world is not sufficient adequately to cope with the demand, especially for the finer grades of wool clothing. The first essential of a sound and permanent reduction in the cost of clothing is that the balance between production and the world's requirements shall be restored, and there is no indication of this being achieved in the near future.

January 29, 1920:

The wool situation for the current year is discussed by Mr. Hitchcock in the following terms:—"During 1919 the Government sold approximately  $1\frac{3}{4}$  million bales of wool—during 1920 it has almost three times this quantity to dispose of, and its ability to do so and the course of prices must depend to a large extent upon the rate at which Europe, including the Central Empires, can absorb wool. This in turn depends on the ability of the Continent to finance wool and rapidly to restart its industries and provide the necessary coal and transport for the purpose. It should not be forgotten that before the war the Continental textile machinery absorbed over one-third of the world's wool supply, and that in order to rehabilitate her position the Continent must import ten times the amount of wool she imported last year. We are within measurable distance of eating up the world's stock of finer wools, while at the same time we have a considerable quantity of other wools which apparently the world is in too extravagant a mood to utilize."

February 12, 1920:

Notwithstanding the hardening tendency for merino wool in London, users of tops show no eagerness to buy. . . .

February 19, 1920:

Worsted spinners continue their policy of keeping out of the market as much as possible, and there is not sufficient new business in fine tops to test values.

February 26, 1920:

Owing to the large amount of wool textile machinery idle or destroyed during the war, and the shortage of shipping, there was a piling up of stocks in Australia and New Zealand. This wool is now coming forward and, in the bulk, will not be fully absorbed this year. This factor in itself completely masks any fall that has occurred in the world's production of raw material. Towards the end of 1918, after the armistice, the Statistical Committee of the Wool Council issued an estimate of the world's wool supplies and consumption during 1919 and 1920. This put the position as follows:

Estimated stock, end of 1919.....	1,318 million pounds
Estimated production in 1920.....	2,700 million pounds
	<hr/>
	4,018 million pounds
Estimated consumption in 1920.....	3,094 million pounds
	<hr/>
Estimated stock, end of 1920.....	924 million pounds

The Statistical Committee, in 1918, counted upon intensified consumption in 1920, with the bulk of Continental machinery work-

ing hard to make up leeway caused by the war. The consumption for 1919 was put at 2,620 million pounds, as compared with 3,094 million pounds in 1920, but it is obvious that the latter estimate will not be fulfilled owing to the inability of Germany to buy substantial quantities of wool and to the general reduction of working hours in Europe and America.

Another point of even greater consequence to the trade is the relationship between fine and coarse wools. There can be no doubt that if Germany had been able to import Australian merinos on a pre-war basis there would have been a famine in fine wools. Present demand and values indicate that there is a relative shortage of fine wool and a surplus of coarse wool. If future conditions in the pastoral countries are to be against the production of fine wool bearing sheep and in favor of crossbred sheep suitable for mutton, present conditions in the consuming centers will become accentuated. We may see a substantial increase in the supply of crossbred wool and a falling off in merinos. At the same time it is not likely that the present disparity between the demand for merino and crossbred wool will continue indefinitely. There must come a time when crossbreds will return to favor.

March 4, 1920:

Messrs. H. Dawson & Co., in their comments on the London sales, observe that "the position of merinos is such that it promises to develop into a serious problem. The present high value, the overwhelming demand from all classes both for home and export consumption, and the slightly diminishing supply, together with the restrictive movement in Australia which threatens to dictate the price of merinos to the world, are all factors which call for careful consideration. At home the public are continually railing at high prices and profiteering, yet will not realize that they hold the remedy in their own hands, and that the majority of the wools available would make very serviceable and much cheaper clothes if the public would only demand and wear them. A change of fashion would soon bring down these extreme prices.

March 11, 1920:

It is evident that home users did not get all the fine combing wools they required at the last London sales, owing to the competition of French and American buyers, and this resulted in a keen demand at Liverpool last week-end, and in Bradford yesterday, with values on a higher plane. This is, perhaps, one of the consequences of the valuable statistical statement issued by Sir Arthur Goldfinch, which demonstrates clearly that whilst Government stocks at December 31st were roughly equivalent to a two years' supply, the shipping program has not been fulfilled, and stocks of Australasian wool in this country at the end of December were 200,000 bales less than at the end of the preceding October.

The position of medium and coarse crossbred wools is so closely affected by the conditions in Central Europe that many firms have sent out representatives to study the prospects of industrial res-

toration in the wool textile centers. From reports received it would appear that the most favorably situated firms cannot run to more than 25 per cent of their war output, whilst many factories are still closed altogether. Not only is there the problem of securing wool, tops, and yarn, but also a serious shortage of coal. The amount of work being done on commission to the account of British, Dutch, and Scandinavian firms is increasing, but it is now generally recognized that something more drastic will have to be done if there is to be a really effective restoration within a measurable period. The Supreme Allied Council has considered the subject and has recommended that provision should be made to enable countries at present barred from purchase in world markets by the conditions of international exchange, and thus unable to restart economic life, to obtain commercial credits for securing raw materials."

April 1, 1920:

In their review of the London sales, Messrs. H. Dawson & Co. write:—"The present series has again emphasized the relative scarcity of merinos, and owing to the combined pressure of the United States and the remarkably strong home trade demand, values have unexpectedly registered a further striking advance. The supplies of merino combings are quite unequal to the demand. It becomes obvious, therefore, that we are dependent on the Government shipping program for providing merino supplies. The demand in the States and also from Japan still calls insistently for fine sorts, and the premium on the dollar is not the only incentive to buy here. The position of merinos has become an acutely dangerous and serious one with twofold 48's yarn at £1 a pound, but the long expected reaction is slow to materialize. Sooner or later the scarcity in finer wools and the present inflated prices are bound to cause a diversion of demand to cheaper qualities, and significant indications of such a reaction have not been lacking in this series."

April 22, 1920:

Messrs. H. Dawson & Co. write:—"There is no doubt that at home we are in the midst of a very remarkable period of industrial prosperity, and if the steady and increasing flow of new business be any criterion, and if it were the only factor, there would seem to be no sign of immediate relief. There is, however, another factor which is steadily assuming a strong domination, and that is the financial question. We seem to be approaching the danger zone in this direction. The enormous lock-up of capital caused by machinery and transport difficulties cannot be indefinitely sustained.

There is a tendency already to restrict credits all round, and the South African market has been the earliest victim. The same tendency is noticeable in United States circles. The long expected and inevitable rise in the Bank rate has at last taken place, and considering the continued increase in the inflation of credit, the rise in prices, and general speculative activities, a move towards

the application of corrective measures is hardly overdue, although the cost of financing business will be thereby increased.

The attitude of the banks towards the financing of the wool trade, and the extent to which the restrictive policy will be applied, is bound to have a great effect on future values, but happily there seems at present to be no serious indication that reasonable credit will be reduced for sound and legitimate business.

May 13, 1920:

From all sections of the trade reports are received of a general lull in buying, and the Bradford market is quiet. Present conditions, both in home and export trade, tend to restrict business, and although the weakness was at first evident in the raw material market, recent events have quickly indicated that it has spread through almost every branch.

May 20, 1920:

The almost complete stagnation of new business in all branches of the wool textile trade and the setting-in of a distinct downward movement in raw material values, has aroused keen interest in the causes of recent developments and in prospects for the new future. The altered situation is not peculiar to Great Britain, it is part of a general change which has come over the whole of Western Europe and North America. Currency inflation, with its natural corollary of high prices, had reached a point which called for serious consideration, and it is evident that the British Government, in common with other Governments, determined upon a policy of deflation by means of restricted credit and special taxation.

May 27, 1920:

The whole trade is looking to the London sales, which commence next Monday, to provide something like a workable basis of values. Everybody is waiting to see how the position will be affected by the offering of 150,000 bales in London during the coming fortnight. No sales since the armistice has been opened in London under less favorable conditions from a seller's point of view than the coming series. The signs and portents from Liverpool, Antwerp, and Boston all indicate an indifferent demand, restricted credit, and a consequent lack of purchasing power in the various consuming centers. The lull in business which has been so marked in England and North America appears to have been felt quite as much in Central Europe, in spite of the fact that there is in those countries a latent demand for textile fabrics. The population of Central Europe is very badly clothed, and the textile manufacturing centers are not yet sufficiently restored to cope with home needs, even if the purchasing power were there. . . .

The progress which has been made in the recuperation of the wool textile industry has been almost entirely in the direction of arranging for a supply of raw material in return for a fixed proportion of the eventual profits on German spinning or weaving.



It is computed by one expert who recently toured Germany, that the output of the whole of the wool textile industry will not exceed 50 per cent of the normal this year, although some favorably situated firms are doing rather better than this. Prior to the war Germany consumed over 400 million pounds of wool per annum, and Germany and Austria together bought 25 per cent of the British Empire clip and 30 per cent of the South American clip. They took 33 per cent of the Australian and South American merino clips and 12 per cent of the Australasian crossbreds, but, in addition, took big weights of crossbred tops and yarns from England. It will be seen, therefore, that the industrial position of Central Europe is bound to have an important effect on the world's wool situation during the next twelve months.

June 3, 1920:

The sharp decline in values at the London sales makes it clear that the period of artificial or inflated values is passing, and that there is a prospect now of prices being brought on to a more sound business basis. In a constantly rising market there is always a good deal of purely speculative buying which tends to accentuate the rise, but the complete elimination of this class of trading during the past two months has helped to bring the demand at the Liverpool, Bradford, and London sales more into harmony with the actual state of business at the consuming centers. On the one hand there is more wool coming to hand than is needed for current machinery requirements, whilst at the other end of the trade there have been heavy cancellations of orders for piece goods from Japan, France, and America. . . . Some big firms have said frankly that they do not intend to buy another pound of wool for a month or two. The sequel to these conditions is the fall at Coleman Street this week. The best combing merinos, which ever since the armistice had been in a stronger position than any other quality, have declined 20 per cent, which coming on the top of a 5 per cent fall at the preceding series, means a drop of over 25 per cent from the highest point. The fact that in these qualities there has been the greatest inflation makes them, of course, more susceptible to the process of deflation which is now going on. Inferior merinos, suitable for the Continental trade, have declined 10 to 15 per cent this week, following upon a similar fall at the preceding series. The percentage decline in crossbreds, particularly the lower sorts, is not so great as in merinos, simply because the advance had been comparatively slight.

June 10, 1920:

At a time when the machinery of the world is not, in the aggregate, consuming at its pre-war rate, the trade is faced with very large supplies of wool, the full weight of which has by no means yet tested this market. Sir Arthur Goldfinch estimated that offerings in this country would have to be at the rate of 225,000 bales per month, in order to leave about 500,000 bales surplus stock at December 31st. During the first three months of the

year there was a deficiency in sales compared with the program of about 200,000 bales. In April the offerings reached the required total for the first time, and April also marked the peak in prices. Large withdrawals commenced in that month and have increased since, culminating in the somewhat drastic curtailment of the present London sales. In other words, sales are lagging behind the Government program so much that at the present rate of marketing the surplus of wool at the end of the year will be 1,000,000 bales or more, instead of 500,000 bales.

July 8, 1920:

Nothing has happened in London to cause users of tops to alter their policy of keeping out of the market as much as possible. The cancellation of orders, chiefly on export account, continues to cause no little uneasiness. Japan and the United States have come into special prominence in this respect.

July 22, 1920:

Business is entirely confined to small lots to meet pressing needs, and the manner in which concessions are granted on quoted prices tends to emphasize the lack of stability in values.

August 12, 1920:

Two official statements explain the distribution of Australasian wool since the armistice, and also the position of stocks on June 30, 1920. The total disposals during the first half of this year were 1,179,981 bales (of which 924,921) were Australian and 255,060 New Zealand), and on June 30th the unsold wool amounted to 2,905,554 bales. It is also announced that after shipping 400,000 bales in July and August, there will remain in the Colonies 1,270,000 bales, "which will be shipped very slowly thereafter as occasion requires." These figures indicate how seriously the Government distribution program has been upset by shipping delays and the falling off in the world's demand for wool. It was contemplated that all Government wool should be finally cleared from Australia before September 30th, and from New Zealand before November 30th. In November last year, it was stated that the Government program provided for an average monthly distribution of 285,000 bales, whereas the actual distribution during the first six months of this year has averaged only 196,663 bales per month. The June 30th surplus of 2,905,554 bales is substantially in excess of a full season's clip, whilst there are abnormally large stocks of South African and South American wool. That is the position broadly, but merinos and fine crossbreds to a lesser extent call for separate examination. A comparison between the June 30th statement and previously published figures relating to December 31, 1919, indicates that about one-third of the merino stocks have been sold in the meantime as against one-quarter of the crossbred stocks. The June 30th surplus comprised about 38 per cent of merinos and 62 per cent of crossbreds, whereas the last Australasian clip was made up of 54 per cent of merinos and 46 per cent of crossbreds.



September 9, 1920.

The spell of buying appears to have exhausted itself, and the market is easier. The situation of the piece trade remains practically unchanged, and there is very little business being done. The home trade is almost at a standstill.

September 23, 1920:

The wool textile industry is almost becalmed by a trade lull, the causes of which are not difficult to understand. In view of the inevitable price adjustments which are taking place there is a general desire to reduce stocks to a minimum. There are many outstanding contracts at boom prices for piece goods which have not yet been completed, but big weights of these comparatively dear fabrics have been disposed of, and the way has been cleared for new business on a lower price basis.

September 30, 1920:

The eve of the opening of the Australian wool sales finds the market here almost stagnant. Financial restriction is still a dominant factor, and it is being keenly felt in every branch of the industry. The absence of orders is being reflected in the amount of idle machinery and the full consequences of heavy cancellations are now being felt.

October 7, 1920:

The London wool sales closed on the 1st October. Of the 87,000 bales offered 40,000 bales were sold. As compared with the closing rates of the August-September series, merinos superior were 15 per cent cheaper, and all other sorts 15 to 20 per cent cheaper, cross-breds fine 10 to 15 per cent cheaper, and medium and coarses neglected and nominally 10 per cent cheaper.

December 2, 1920:

The whole trade is being brought to a close grip with the problem of cancellations, which is seriously aggravated by the prolonged quietness of business and the very difficult outlook. The essence of the situation is that the bulk of the raw material used in the industry is available in the primary markets at, or near to, pre-war prices, and in the coming year an important item in the cost of cloth will be down accordingly; whereas on the other hand the huge stocks of finished goods in the warehouses were made from wool bought at the boom prices. This factor, plus general financial restriction throughout the world, accounts for the epidemic of cancellations which has caused so much difficulty.

December 9, 1920:

Nobody is disposed to buy wool, tops, or yarns so near the end of the year in a market which is still very weak, and there is no indica-

tion of any movement in piece goods. Unemployment is becoming a serious problem throughout the West Riding. There are thousands entirely out of work, and many thousands employed only 20 to 24 hours per week.

December 23, 1920:

There is no appreciable change in the industry in this country. On the Continent, users appears to be in a rather better position, because they are less hampered by stocks, but trade is by no means satisfactory. The raw material outlook, however, is somewhat more hopeful. Users have bought so little during the past few months that actual trade stocks are light, and consequently machinery requirements are beginning to make themselves felt. In addition, there is a feeling that the fall in raw material prices has now brought them down to somewhere near a basis on which operations can be conducted with more confidence. Reckoned in relation to the prices of other commodities, wool values for all descriptions are probably lower than they have ever been before. There is more confidence on the part of operators, and a disposition to think that in the near future there will be some increase in the demand for wool.

Messrs. H. Dawson & Co. are quoted as saying: The huge available stocks, which constitute the great "bogey" in the situation, are all too visible, but with a few exceptions it is certain that consumers are very lightly stocked, and that normal working supplies in the mills are at a minimum. The great combing establishments are idle for want of raw material, and most consumers, owing to falling markets, have worked down their supplies to the smallest possible margins. Although the basis of prices may be lower there will soon be machinery hunger in most centers. The financial strain will be lessened by the fact that at these lower prices less money will be required, and it is even more certain that as retail prices decline confidence in buying will be increased. The terrific fall in values is not only being felt at the consuming end of the trade, but growers are beginning to be seriously disturbed. It is not surprising, therefore, that collective efforts of a drastic character are being made in many quarters to ease the situation.

#### SHEEP NUMBERS DECLINE IN THE UNITED KINGDOM.

In England and Wales, where a uniform number of sheep has been sustained heretofore with surprising success, the number declined during the year by 1,750,000, the total being 13,380,000. This is the smallest total ever recorded and falls 5,340,000, or 29 per cent, below the average of the ten years immediately before the war.

In Scotland the total of 6,345,809 is 64,230 less than the number reported in 1919.

In Ireland the total of 3,588,892 is 75,547 larger than for the preceding year. The total for the United Kingdom is 23,314,671.

The figures covering the flocks for a period of years in millions in the United Kingdom are as follows:

1870-4 .....	28.6*	1895-9 .....	26.6
1875-9 .....	28.4	1900-4 .....	25.9
1880-4 .....	25.3	1905-9 .....	26.3
1885-9 .....	25.8	1910-14 .....	25.4
1890-4 .....	27.6	1915-19 .....	23.7

\* Three ciphers omitted.

A disturbing feature of the industry is the very considerable decrease in the number of breeding ewes during the years 1914 to 1919 when the number dropped from 9,800,000 to 8,600,000. The serious decrease began after June, 1917, the number declining over 13 per cent in two years. The three factors which brought about the present situation are said to be special economic conditions, control of prices, distribution and sale by the Government, and extension of arable cultivation.

#### GERMANY.

For the first time at least since 1914 we present official statistics of the number of sheep in Germany. They cover a period of thirty-nine years and are as follows:

##### NUMBER OF SHEEP IN GERMANY, YEARS 1880 TO 1919, INCLUSIVE.

1880.....	20,933,000	1913.....	5,520,837
1885.....	18,070,000	1914.....	5,471,468
1890.....	15,270,000	1915.....	5,073,478
1895.....	11,956,000	1916.....	4,979,128
1900.....	9,693,000	1917.....	4,953,772
1905.....	7,854,000	1918.....	5,346,684*
1910.....	6,564,000	1919.....	5,373,402**
1912.....	5,803,217		

\* Without Alsace-Lorraine.

\*\* Without Alsace-Lorraine and the territory seceded to Poland.

An official estimate shows the number of sheep and lambs in Germany for the years 1918, 1920, and 1921. It will be observed that instead of fewer sheep, as was supposed there would be, there is a steadily increasing number of both lambs and sheep over one year of age. The figures are as follows:

##### OFFICIAL ESTIMATE OF NUMBER OF SHEEP IN GERMANY, YEARS 1918, 1920, AND 1921.

	1918.	1920.	1921.
Total sheep.....	5,791,382	6,241,726	7,021,342
Sheep under one year of age .....	2,126,593	2,014,401	2,642,370
Sheep over one year of age.....	3,664,869	4,227,325	4,378,972

#### AUSTRALASIA.

*Dalgety's Wool Review* for the season of 1919-1920 gives the following figures for sheep in the several states of the Commonwealth and for Australasia. The increase of sheep population predicted a few years ago by some American economists has not taken place. During the season the losses from drought and other causes were

heavy, being 4,704,181 in the Commonwealth and 1,596,937 for New Zealand, or a loss of 6,301,118 sheep in the year. The figures for 1920 are almost those for the year 1912, and nearly ten million smaller than the number in 1911.

## SHEEP RETURNS.

States.	1919.	1918.	1917.	1916.	1915.
New South Wales . . . . .	37,381,874	39,018,928	37,455,330	33,713,901	33,009,033
Victoria . . . . .	14,422,745	15,773,502	14,760,013	12,576,587	10,545,632
Queensland . . . . .	16,633,746	18,220,985	15,812,425	15,245,508	16,107,225
South Australia . . . . .	6,625,184	6,229,519	5,091,282	3,800,000	3,674,547
Western Australia . . . . .	6,697,950	7,161,402	6,454,957	5,501,000	4,831,727
Tasmania . . . . .	1,781,000	1,841,944	1,709,343	1,702,579	1,613,139
Commonwealth . . . . .	83,542,499	88,246,680	81,283,350	72,539,575	69,781,303
New Zealand . . . . .	23,914,506	25,511,443	25,270,386	24,753,324	24,607,868
Australasia . . . . .	107,457,005	113,758,123	106,553,736	97,292,899	94,389,171

States.	1914.	1913.	1912.	1911.
New South Wales . . . . .	36,287,000	39,842,518	39,436,118	45,032,022
Victoria . . . . .	12,051,685	12,113,682	11,892,224	13,857,804
Queensland . . . . .	23,129,919	21,786,600	20,248,580	20,387,838
South Australia . . . . .	4,208,461	5,073,057	5,481,487	6,267,477
Western Australia . . . . .	4,471,941	4,418,402	4,593,458	5,408,583
Tasmania . . . . .	1,862,600	1,862,600	1,800,000	1,788,310
Commonwealth . . . . .	82,011,606	85,096,859	83,451,867	92,742,034
New Zealand . . . . .	24,465,526	24,798,763	23,750,153	24,269,620
Australasia . . . . .	106,477,132	109,895,622	107,202,020	117,011,654

The net production of wool for the Commonwealth and New Zealand in bales and pounds for the last three seasons has been as follows:

## NET PRODUCTION AND WEIGHT.

States.	1919-20.		1918-19.		1917-18.	
	Produc- tion.	Net Weight.	Produc- tion.	Net Weight.	Produc- tion.	Net Weight.
	<i>Bales.</i>	<i>Pounds.</i>	<i>Bales.</i>	<i>Pounds.</i>	<i>Bales.</i>	<i>Pounds.</i>
New South Wales . . . . .	940,190	299,920,610	952,471	306,209,901	899,625	289,967,130
Victoria . . . . .	459,066	152,158,866	426,135	136,998,141	366,222	118,040,675
Queensland . . . . .	324,130	104,693,990	314,348	101,060,738	333,356	107,447,306
South Australia . . . . .	181,447	58,244,487	169,618	54,530,490	152,601	49,186,354
Western Australia . . . . .	122,378	40,507,118	130,981	42,109,081	119,456	38,503,058
Tasmania . . . . .	38,701	11,532,898	37,363	12,011,820	36,071	11,626,404
Commonwealth . . . . .	2,045,912	647,057,969	2,030,916	652,920,171	1,907,331	614,770,927
New Zealand . . . . .	580,093	204,964,515	627,831	227,521,228	581,531	209,840,966
Australasia . . . . .	2,628,005	852,022,484	2,658,747	880,441,399	2,488,862	824,611,893

*Crossbred Versus Merino.*

In view of the long standing demand for fine wools the figures showing their production in the country noted for them will be of interest to every one in the wool manufacture. *Dalgety's Review* for the season of 1919-1920 has the following to say concerning crossbred and merino wools:

Ten to twelve years ago a strong export demand set in for sheep and lambs for export, and buyers favored crossbred sheep and lambs. They were never neglectful of prime, large-framed merinos in sheep, but generally crossbreds were preferred in the lamb stage. That factor led to crossbred flocks appearing on a number of pastoral properties that were previously noted for their merino wool clips. It was the turning point in wool growing in New South Wales. Side by side with that change in the flocks on many pastoral holdings, was the subdivision of estates and the increase in the proportion of small to large flocks. The small grower, often combining farming with sheep raising, inclined rather to the crossbred than the merino. When the World War commenced, and crossbred wool values rose nearly to the equal of merino, it was an inducement to growers to grow crossbred wool for the actual returns. Those were the factors that led to the original change and the development since. Pastoral conditions were too adverse during the season under review to show any marked increase in crossbred or any swing back to the merino. The closer settlement movement is in favor of the increase of wool of crossbred growth, and sheep losses by drought would affect merino flocks to a greater extent than the crossbred; consequently, the quantity of wool dealt with would be in favor of the coarser qualities. The proportion of merino appraised in New South Wales during the season was 68.69 per cent, and crossbred 31.31 per cent, compared to 70.38 per cent merino and 29.62 per cent crossbred in the previous statistical year.

There is evidence that growers in Queensland are realizing that the large-framed, plain-bodied, robust merino is the sheep most adaptable to produce a maximum return, and those owners who tried crossbreds in the western districts are reverting to merinos.

The adverse season on the Darling Downs, where crossbreds are most in evidence, has resulted in inferior clips from this district, and the percentage of crossbred to merino has only shown a slight increase. The trend of values in favor of fine wools will further influence the fashion in favor of merinos.

In North Queensland the merino still reigns supreme, and there seems no immediate likelihood of the crossbred entering into serious competition. Conditions are eminently suitable for the merino sheep, and until there is a better market for the mutton, the introduction of the crossbred is not likely to be seriously considered by the North Queensland breeder, especially whilst fine wools continue to sell at so satisfactory a figure.



*Previous Seasons' Crossbred Increase.*

In February, the Central Wool Committee issued a statistical summary, covering the operations of the wool pool during the 1918-19 and 1917-18 seasons, in which the quantities of crossbred and merino were compared. For instance, in 1918-19 the crossbred wools received by the pool increased by 107,241 bales, or 16.98 per cent over the quantity delivered in 1917-18. The production in 1918-19 was 115,860 bales, or 6.06 per cent greater than the previous season. In 1917-18 merino wool constituted 66.93 per cent of the total clip, and crossbred wool the remaining 33.07 per cent. In 1918-19 the merino production fell to 63.53 per cent and crossbred correspondingly rose to 36.47 per cent. Of the total quantity dealt with in 1918-19, namely, 2,025,475 bales, 1,286,760 bales were merino and 738,715 crossbred. The merino and crossbred were classified as follows:

	Combing. <i>Per cent.</i>	Clothing. <i>Per cent.</i>	Carbonizing. <i>Per cent.</i>
Merino.....	78.46	12.65	8.89
Crossbred .....	73.95	11.12	14.93

On June 30, 1920, there remained in the Commonwealth 1,161,823 bales of wool of the British Imperial Government's purchase, comprising the following:

	Merino.	Crossbred.	Totals.
Greasy.....	320,815	439,411	760,226
Scoured.....	177,431	224,166	401,597
	<hr/> 498,246	<hr/> 663,577	<hr/> 1,161,823

In addition to the foregoing, the following quantities, totalling 341,184 bales, were in transit from the Commonwealth to the United Kingdom, Antwerp, and Dunkirk:

	Merino.	Crossbred.	Totals.
Greasy.....	186,544	102,312	288,856
Scoured.....	33,094	19,234	52,328
	<hr/> 219,638	<hr/> 121,546	<hr/> 341,184

For the season of 1919-1920 Dalgety gives the following statistics showing the number of bales of merino and crossbred wools which came into the various Australasian markets:

## AUSTRALASIAN WOOL TRADE STATISTICS, SEASON 1919-20.

## MERINO AND CROSSBRED.

Description.	Sydney.		Melbourne.*		Geelong.		Adelaide.		West Australia.	
	<i>Bales.</i>	%	<i>Bales.</i>	%	<i>Bales.</i>	%	<i>Bales.</i>	%	<i>Bales.</i>	%
Merino . . . . .	516,975	69	158,814	35	55,427	35	191,797	90	108,689	89
Crossbred and all Strong wool breeds . . . . .	227,195	31	290,389	65	103,087	65	21,957	10	13,652	11
	744,170		449,203		158,514		213,754		122,341	

Description.	Brisbane.		Tasmania.		New Zealand.		Total 1919-20.	
	<i>Bales.</i>	%	<i>Bales.</i>	%	<i>Bales.</i>	%	<i>Bales.</i>	%
Merino . . . . .	309,365	97	11,422	30	12,775	2	1,365,264	52
Crossbred and all Strong wool breeds . . . . .	10,557	3	26,586	70	567,318	98	1,260,741	48
	319,922		38,008		580,093		2,626,005	

\* Including Ballarat and Albury.

*Average Weight of Australasian Bales.*

For a series of years the average net weight of Australasian bales as given by *Dulgety's Review* was:

Seasons.	Average Net Weight. Pounds per Bale.	Seasons.	Average Net Weight. Pounds per Bale.
1919-1920 . . . . .	324.4	1912-1913 . . . . .	321.2
1918-1919 . . . . .	331.1	1911-1912 . . . . .	331.2
1917-1918 . . . . .	331.3	1910-1911 . . . . .	332.1
1916-1917 . . . . .	327.3	1909-1910 . . . . .	335.5
1915-1916 . . . . .	322.7	1908-1909 . . . . .	330.6
1914-1915 . . . . .	329.1	1907-1908 . . . . .	333.7
1913-1914 . . . . .	327.2	1906-1907 . . . . .	339.7

*Record Prices Made.*

Some of the wools acquired for the British Government at the flat rate of 15½d. per pound greasy, and sold to the order of the Department of Raw Materials during the season under review at auction in London, not only far exceeded previous record prices of recent times, but superseded the highest price ever previously paid for Australian grown wool. Prior to the 1919-20 season 124d. was the record price for Australian fleece; obtained for a one-bale lot of MacArthur's washed wool in London on August 18, 1821. That was superseded at the March London series by a 26-bale lot of Victorian scoured super combing, which realized 136d. per pound. The absolute record prices for Australian grown merino fleece now stand as follows:



Description.	Sold in London.	Price.
Scoured	March, 1920	136d.
Washed	August, 1821	124d.
Greasy	February, 1920	109d.

*Huge Quantities Contracted for by British Government.*

In the midst of the World War, when it was extremely difficult to get enough ships to transport wool from the great producing countries, the British Government in December, 1916, agreed with the Governments of Australia and New Zealand to purchase all the wool then remaining in first hands and all wool to be shorn up to June, 1917, the price being fixed at 55 per cent above the level of 1913-14 prices. In 1917 an extension of the contract was arranged for another year, and in 1918 contracts were made for the purchase of their entire wool clips for the duration of the war period and one entire wool year thereafter, which was interpreted to mean all wools appraised up to June 30, 1920. The price was to apply to wool used by the British Government and for allied military purposes, but it was agreed that half the profits on sales of surplus wool should be turned over by the British Government to the Dominion Governments for the benefit of the wool growers. *Dalgety's Review* shows the magnitude of the acquisition under the contracts covering three and a half years, as follows:

*Quantities and Descriptions Valued.*

The quantity of greasy and scoured and the flat rate value were as follows:

Season.	Bales.	Pounds.	Value — Flat Rate. £
1919-20.			
Greasy .....	1,710,873	579,709,381	37,439,564
Scoured .....	288,708	67,343,411	8,698,524
Totals.....	1,999,581	647,052,792	46,138,088
1918-19.			
Greasy .....	1,759,031	599,438,446	38,713,733
Scoured .....	223,516	52,659,353	6,801,833
Totals.....	1,982,547	652,097,799	45,515,566
1917-18.			
Greasy .....	1,672,448	569,612,721	36,787,488
Scoured .....	201,924	47,340,301	6,114,789
Totals.....	1,874,372	616,953,022	42,902,277
1916-17.			
Greasy .....	982,802	323,752,519	20,909,017
Scoured .....	145,910	34,307,991	4,431,448
Totals.....	1,128,712	358,060,510	25,340,465
Totals:			
Greasy .....	6,125,154	2,072,513,067	133,849,802
Scoured .....	860,058	201,651,056	26,046,594
Grand Totals.....	6,985,212	2,274,164,123	159,896,396

*Stocks of Acquired Wool.*

At the close of the 1919-20 statistical wool year the unshipped wool in the Commonwealth acquired for the Imperial authorities totalled 1,161,823 bales. There was very little remaining of the 1917-18 season's production, and what there was consisted of crossbred, but there was a considerable proportion of the 1918-19 season's clip, the bulk of which was crossbred. The quantities compare as follows:

*Season 1919-1920.*

	Merino.	Crossbred.	Total.
Greasy .....	312,191	344,861	657,052
Scoured .....	176,322	156,552	332,874
	<hr/> 488,513	<hr/> 501,413	<hr/> 989,926

*Season 1918-1919.*

Greasy .....	8,624	87,168	95,792
Scoured .....	1,109	67,476	68,585
	<hr/> 9,733	<hr/> 154,644	<hr/> 164,377

*Season 1917-1918.*

Greasy .....	.....	7,382	7,382
Scoured .....	.....	138	138
	<hr/> Nil.	<hr/> 7,520	<hr/> 7,520

*Summary.*

Greasy .....	320,815	439,411	760,226
Scoured .....	177,431	224,166	401,597
	<hr/> 498,246	<hr/> 663,577	<hr/> 1,161,823

*Total Amounts Received.*

The following statement sets out the amounts received from the Imperial Government and other sources for payment within the Commonwealth of wool and sheepskins under the contracts:

Season 1916-1917.....	£27,087,516	8	10
1917-1918.....	46,033,276	13	11
1918-1919.....	49,848,968	8	3
1919-1920.....	50,926,297	18	3
Total.....	<hr/> £173,896,057	<hr/> 9	<hr/> 3

The decision of the British Government to terminate its contract on June 30, 1920, caused much discussion concerning the disposition of the great amount of surplus wool in Australia in the hands of the British Government and the best way to dispose of the new clip. An Australian wool council composed of wool growers and selling brokers was formed early in the year and a scheme was formulated to control the clip of 1920-1921, which was submitted to the

growers and rejected by them, it requiring a three-fourths' vote to put it into effect. Prime Minister Hughes presented a scheme of his own by which the export of 1920-21 wool was to be prohibited until October 1, 1920; public auctions of wool in Australia (new clip only) to be resumed after October 1, 1920; and auctions of Australian wool in London to be suspended from October 1, 1920, to May 1, 1921.

Nothing came of this grotesque proposal, but the program of getting the Australian wools to market and into consumption having failed, the Australian Government came forward with a proposal, consisting of two parts, which, as stated by Sir Arthur Goldfinch, Director of Raw Materials, was:

*The British Australian Wool Realization Commission.*

(1st) The Australians ask that the Government shall hand over to them at the earliest possible moment half of the surplus assets of their section of the Wool Purchase Account, consisting of about 900,000 bales of wool and a number of million pounds sterling which are their half of the cash surplus over all liabilities of that account. They propose to capitalize these assets at £25,000,000, and to form therewith a co-operative association, of which the proprietors will be the entire sheep farming community of Australia, the holding of each farmer being pro rata to the value of the wool sold by him to the Imperial Government during the past four years.

(2nd) They propose that the British Government shall hand over to the Association so formed for sale on agency terms the British half of the carry-over of Australian wool, which will also be about 900,000 bales.

In explanation of the scheme, Sir Arthur Goldfinch wrote to the President of the Bradford Chamber of Commerce in part as follows:

It must be recognized that the proposals contain absolutely nothing which affects the normal course of business in either the Australian or the British wool markets. The new clip, now coming forward in normal quantities, will in no way be subject to the Association, so that from Australia equally with all other wool producing countries the flow of wool into England may reasonably be expected to continue to the full extent of the requirements of the industry and the desire and ability of the trade to purchase the wool. No restriction and no preference of any kind are asked for by Australia. . . .

The proposed arrangements only tie up in the hands of the Association the carry-over of Australian wool of the old clips, which must be regarded to a very great extent as a supply over and above the normal. The new Association is to be called the British Australian Wool Realization Association, and its main object is the realization to the best advantage of the old clip wool.

The appointment of thoroughly qualified and responsible men of business as directors, whose nomination is subject to the approval of the British Government, will be a sufficient guaranty that the affairs of the Association will be conducted in a moderate and reason-

able spirit. Anything in the nature of an attempt to hold up wool at unnaturally high prices is quite outside the desires of the founders of the Association, and would in any case be defeated by market conditions if it were tried.

This plan was approved by the British Government and a similar agreement is likely to be made with the South African wool growers. It is believed that the New Zealand surplus wools will also come under the same control.

The British members of the Committee are Sir Arthur Goldfinch, Director General of Raw Materials, chairman and governing director; Sir J. Ferguson, joint general manager, Lloyds Bank, Mr. J. A. Cooper, Director Raw Materials, Finance; Mr. F. Willey, of Messrs. F. Willey & Co., Limited, and Mr. H. E. Davison, of Messrs. Dalgety & Co., Limited.

The Melbourne board is made up as follows:—Sir J. M. Higgins, chairman and governing director; Mr. W. S. Fraser, Mr. W. A. Gibson, Mr. J. Mackay, Mr. C. R. Murphy, and Mr. W. Riggall.

There will be a consultative committee in Australia, constituted as follows:—Mr. W. J. Young, Sir H. Y. Braddon, Mr. J. M. Niall, and Mr. J. Kidd. There will also be an Australian advisory council of eighteen members from all Australian states.

The Commonwealth Government have undertaken, on behalf of the wool growers and of the Association, that the carry-over wool shall be sold as promptly as market conditions will permit. They have further undertaken that the operations of the Association shall be conducted with due regard to the legitimate interests of the British consumer and to the maintenance and, if possible, the increase of existing trade relations between Australia and the United Kingdom in the wool and wool products.

On the contrary, Sir John Higgins, addressing a recent Melbourne wool conference, is quoted as having said: "Under the scheme the Association will obtain control of all Australian carry-over wool, and as it is composed solely of Australian wool producers, they will have the management of the sale of their own commodity, and can market it in conjunction with the current clip as may be deemed to be in the best interests of all concerned." A Sydney wool authority, representing the growers' point of view, indicates what it is intended will be done. He wrote: "If wool prices are to be kept on a reasonable basis, and a slump avoided, it can only be done by keeping as much wool as possible in Australia, and doling it out to buyers in quantities in keeping with their capacity to operate. This in itself should stop any indiscriminate shipping. Growers have it in their hands to render this regulation of operations effective, and it was never more necessary than it is at present to use it wisely. Those who hold their wool for sale locally strengthen the growers' position; those who ship strike a blow at it. Thus, from reasons of present sound economy and future prospects, it is desirable to add as little as possible to the London accumulation of unsold wool."

#### *Wool Consumed in Australia.*

Efforts have been made for some years to increase the consumption in Australasia of wools grown in the Commonwealth and New

Zealand. In 1907 a Bounties Act was passed by which the Government of Australia endeavored to foster the production of tops for export. Under that law the following sums of money were paid in bounties while it was in force:

Year.	£	Year.	£
1908-09 .....	326	1912-13 .....	13,601
1909-10 .....	4,933	1913-14 .....	12,706
1910-11 .....	8,522	1914-15 .....	7,727
1911-12 .....	16,898	1915-16 .....	5,828

The quantities of wool on which the bounties were paid were as follows:

Year.	Pounds.	Year.	Pounds.
1908-09 .....	52,085	1912-13 .....	3,134,614
1909-10 .....	789,216	1913-14 .....	3,068,170
1910-11 .....	1,363,555	1914-15 .....	3,635,811
1911-12 .....	3,122,244	1915-16 .....	2,824,436

The quantities of greasy wool used in the factories of the various states of the Commonwealth from 1912 to 1917 inclusive were as follows:

	1917.	1916.	1915.	1914.	1913.	1912.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
New South Wales . . . .	6,556,988	6,467,800	*4,173,576	*4,173,576	2,484,446	2,420,000
Victoria . . . . .	8,669,460	11,052,250	13,042,250	7,215,380	6,978,300	5,535,483
Queensland . . . . .	304,091	358,504	377,538	356,553	406,829	583,892
South Australia . . . .	995,164	1,065,130	1,065,130	389,700	645,000	710,000
Tasmania . . . . .	1,172,000	1,244,844	1,217,780	1,141,200	1,105,000	1,331,375
Commonwealth . . . . .	17,697,703	20,188,528	19,876,274	13,276,409	11,619,572	10,331,375

\* Year ended June 30, 1915.

In addition to the quantities given for locally used tops, tops were manufactured and exported by mills in the Commonwealth as follows:

Year.	Pounds.
1916-17 .....	4,869,452
1917-18 .....	4,571,357

#### *Tops in Australia.*

The purchases of wool by various companies engaged in the combing of tops for export, controlled by the Central Wool Committee, under agreement with the Commonwealth Government, during the season, amounted to 10,505,744 pounds of raw wool, the appraised value of which was £1,030,057, averaging 23.29d. per pound (greasy).

The output of tops for export in Australia during 1919 was 4,099,173 pounds, which were sent to the following destinations:—



United Kingdom, 177,908 pounds; Sweden, 11,403 pounds; Norway, 11,224 pounds; America, 731,868 pounds; and Japan, 3,166,770 pounds.

*Quantity Secured by Mills in New Zealand.*

The quantity of wool secured by woolen mills in New Zealand out of the pool during each season of the acquisition period was as follows:

	Bales.	Pounds.
1916-17 .....	16,821	6,026,967
1917-18 .....	20,692	7,264,370
1918-19 .....	18,821	6,421,039
1919-20 .....	25,238	8,705,739

*An Illusory Manufacturing Scheme.*

Even before the unexpected and sudden break in commodity prices, which affected wool values greatly, hit the Australian markets, a project for converting the whole of the Australian wool clip into wool manufactures was launched in March, 1920, by Mr. Stirling Taylor, Director of the Federal Bureau of Commerce and Industry. It was not proposed to invite or induce the thousand and one specialists in wool manufacture, who consume Australian wool, to open mills in the Commonwealth and cater for the requirements of the wool users of the world, but the proposal was for growers to subscribe capital, and become joint owners and directors in existing wool mills. One of the reasons advanced was that it would give them security and insurance against the evil effects of drought. A fair start was to be made by the manufacture of a third of the wool production, and the complete objective reached in 10 or 15 years. The only limit to the expansion would be the quantity of wool grown. It was stated that a leading woolen manufacturer supplied him with data which indicated that to treat 200,000,000 pounds of greasy wool, or one-third of the total Australian clip, and turn it into piece goods, cloth, flannel, and blankets would require a capital of £13,850,000, of which ten millions would be needed for plant, and that as approximately 80,000 growers supply wool to the Central Wool Committees, £200 from each of them would amount to £16,000,000. Commenting on this proposal *Dalgety's Review* said:

But the 80,000 are not subscribing the capital; and it is doubtful if a very large proportion could even if they would. The wool manufacturing industry, like all other industries, can only expand on proper business lines, by wool manufacturers, not wool growers. Specialization is one of the great features of the wool industry. Growers become expert in sheep breeding and the management of their properties; not in wool manufacturing. An almost infinite variety of fabric is woven from wool. Wool from every breed and variety of sheep, and wool from all parts of the sheep is put to some special use by those who make a special study of some branch of it. The wool manufacturing industry is so intricate and various that only experts can successfully cope with one or two branches of it.



Any attempted development on chimerical lines is sure to lead to failure and loss.

It is quite within the province of Australian woolen mills to manufacture certain classes of material beyond domestic requirements; but a considerable amount of experience has yet to be gained before the daintier fabrics can be produced to cater for the Australian demand, even though supported by a heavy tariff. When it comes to exporting Australian textiles, they have to go on to the world's markets in competition with fabrics that are manufactured under industrial conditions not influenced by basic wages and federal or state industrial arbitration court awards; then experience will be gained that will test the chimerical scheme of the Director of the Federal Commerce and Industry Bureau. Such a prospective market for Australian textiles would also have to compete in price against similar goods produced in Germany, where the operatives work more hours per week than Australians and at lower wages; or the Japanese, who have better machinery than many English mills, and have a working week of 60 hours, at an average of 14s. per week wage. These older textile countries, with each class of goods specialized to a fine art, have expert designers, and a better supply and greater variety of dyes. It is possible to prohibit all wool textiles from coming into the Commonwealth; and to restrict consumers to Australian made articles. In that case, from 8 to 10 per cent of the clip would be consumed in the Commonwealth. To suppose that the other 90 per cent can be manufactured within the next 10 to 15 years, per the medium of the scheme propounded by Mr. Taylor, and profitably sold in the world's markets, is mere moonshine. The Australian woolen trade is expanding and will be developed considerably, but it can only be done on strictly business lines by manufacturers who stand to gain or lose by their enterprise.

## AFRICA.

THE NUMBER OF SHEEP AND GOATS IN THE UNION OF SOUTH AFRICA  
AS OF MARCH 31, 1919.

Province.	Flocks.	Sheep.		Goats.		Total.
		Woolled.	Crossbred and Others.	Angora.	Others.	
Cape . . . . .	134,901	14,603,003	4,008,273	2,350,361	3,999,263	24,960,900
Transvaal . .	45,238	3,641,326	680,684	68,627	1,109,398	5,500,035
Orange Free State . . . . .	25,161	8,661,230	410,716	114,151	100,235	9,286,332
Natal . . . . .	38,931	1,713,043	383,028	49,395	1,024,863	3,170,329
Total for the Union . . . .	244,231	28,618,602	5,482,701	2,582,534	6,233,759	42,917,596

The following table shows the exports of wool from South Africa for a series of years and the countries to which they were sent:

## EXPORTS OF SOUTH AFRICAN WOOL IN THE GREASE TO CHIEF PURCHASING COUNTRIES, YEARS 1913 TO 1919, INCLUSIVE.

Countries.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
United Kingdom,	96,028,737	88,725,601	133,803,833	107,537,602	23,313,704	35,809,838	96,462,203
Belgium . . . .	20,695,225	10,717,603	. . . . .	. . . . .	. . . . .	. . . . .	12,662,059
France . . . .	4,898,212	1,969,741	. . . . .	. . . . .	59,800	261,682	9,588,452
Germany . . . .	61,123,713	39,602,452	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Canada . . . .	. . . . .	. . . . .	32,876	39,415	632,917	4,149,416	958,322
Italy . . . . .	924,852	. . . . .	309,150	. . . . .	. . . . .	1,528,199	43,002
Japan . . . . .	. . . . .	. . . . .	16,256	83,196	39,307,475	30,878,226	39,800,648
United States . .	221,522	1,229,133	52,091,137	48,235,842	76,530,988	70,980,978	71,502,522
All other . . . .	5,094	15,037	. . . . .	. . . . .	. . . . .	334,365	573,943
Total . . . .	183,897,355	142,259,567	186,253,252	155,896,055	139,344,834	143,942,704	231,591,151

In his report General Enslin holds out the hope that there are portions of South Africa which can hold increased sheep numbers if they are stocked and developed as such. He wrote:

There are still large portions of South Africa such as Bechuana-land, Western Transvaal, North Western Cape, and what was known as German West Africa which, being eminently suited for merino sheep, require stocking, and will, no doubt, be stocked in the near future. Furthermore, large portions of the plateaus in German East and British East are suitable for sheep raising, and would, when properly settled and developed, carry as many sheep per square mile, on their rich and well-watered pastures, as Australia and other countries.

General Enslin learned from his investigations among manufacturers of woolens and worsteds in England and the United States that the defects in South African wool generally complained of are: (1) The wool is in many cases too short for combing purposes, owing chiefly to 6, 8, and 10 months' shearing; (2) the wool is not properly classed, short wool being mixed with long and coarse and colored with merino; (3) clips are irregular in length and quality; (4) the wool is somewhat tender and consequently, when combed, yields too much noil; (5) the bales are often improperly packed; (6) the yields of clean wool from clips are very poor on account of the wool being too greasy (yolky) and containing too much dirt. To remedy these defects, General Enslin is endeavoring to impress South African farmers with the importance of proper standardization, grading, and inspection of their wool.

Noting the progress made in improving the flocks of South Africa by the importation of high class merino stock from Australia, *Dalgety's Review* for 1919-1920 says:

South Africa continues to develop as a merino wool growing country, and Australia no longer stands pre-eminent as the merino wool growing country of the world. Signs of change could be observed soon after the close of the South African war. The Australian standard of sheep breeding and wool growing was introduced in South Africa. Its advantages were apparent, and results justified growers in pursuing the improved methods. At about the same time Australian sheep breeders began to cater for the mutton and lamb

export trade. Where merino flocks formerly roamed the pastures, crossbreds began to appear. They suited exporters much better than the merino, especially the small-framed merino of the Vermont type, such as was largely in vogue at that time. Crossbred lambs particularly found favor with export buyers; consequently, merino flocks, near to fat stock markets or meat works, began to diminish in size and importance. A larger proportion of crossbred wool was grown, and the tendency increased, particularly in New South Wales. Another factor of late was the demand and high price for crossbred wool during the great World War. While these crossbred tendencies are being pursued in Australia the South African flockmasters are breeding up their studs and flocks with a steady stream of the highest class merino rams from the Commonwealth. Merino wool grown in South Africa is taking a high place in the estimation of manufacturers in the United Kingdom, and through American and Japanese users largely availing themselves of supplies during the last three to four years, the quality of South African merino is appreciated to a greater extent than was the case prior to the war. All the factors tending to advance South African merino-grown wool have been in evidence of late, and it behooves growers in the Commonwealth to consider the position. The South American flocks are mainly of the crossbred and other coarse quality type. Such wools are more likely to preponderate than merino. Whenever, therefore, merino sheep for mutton can be grown equally as profitably as crossbred, it should have pride of place, because merino wool promises to be of greater value and give more profitable results. Pastoral conditions are in many respects similar to those experienced in Australia. There was a severe drought in South Africa last year. It was described in November as the worst that had been experienced for 50 years, and was general throughout the Union, except on the coastal belt.

*Founding Strains with Australian Studs.*

South African sheep breeders who secured stud merinos from Australia a few years ago have now evolved strains of their own that are no longer put forward as imported types, whether from New South Wales, Victoria, South Australia, or Tasmania. Mr. C. Mallinson, formerly principal sheep and wool expert, said at a meeting of the South African Breeders' Association at the Bloemfontein Show:—"If sheep are bred to South African standard at any one farm, and that strain becomes known, then it should be known by the name of that farm as a particular strain of South African merino. I have seen sheep at this show, not one, but dozens, as good as any exhibited at the shows at Sydney." Thus, there are breeders there apparently equal to many in the Commonwealth, and from the purchases made during the season under review they intend securing stud sheep from Australia that will found flocks equal to our best. The South African Minister for Agriculture arranged for the principal Government sheep and wool expert to visit Australia prior to this year's annual stud sheep sales in Sydney, to investigate the sheep and wool industry here. He was instructed to purchase sheep for the Union Government, and also to purchase sheep for South African breeders. Included in his purchases was the South Australian stud merino ram, Fealty, for 4000 guineas. The highest priced N.S.W. merino ram,

Bonnie Charlie, sold for 3600 guineas during this year, was purchased by the South African breeders. The Haddon Rig stud ram, Prince Charming, at 2000 guineas, with five two-tooth ewes, went to South Africa. Another Haddon Rig stud ram, Royal Dandie, at 1500 guineas, and 140 stud ewes were purchased by the South African Government expert. Such and similar purchases must have a considerable influence in the production of merino wool in the near future. There are districts in the Union where the finest quality of merino is grown. As high as 85½d. per pound was secured for the top line of a Graafe Reinnet clip in the grease in November last (meaning November, 1919). The average price for 117 bales was 62½d.; this was a South African record for the hogget wool at 85½d. as well as for the whole clip of 62½d. per pound.

#### *Particulars of the Record Clip.*

A Port Elizabeth wool expert, writing on the record clip referred to in the foregoing, said:—"The get-up and classification of the clip, which attracted the attention of all buyers, was all that could be desired. The wool was sound, of extra length, and superfine in quality. Mr. Minnaar is to be highly congratulated on having produced such a splendid clip." Following upon that, a *Wool Record* (Bradford) writer says he has before him samples of Grassdale wool shorn in 1918, and if the clip sold last November was anything like the previous one, it must have presented a picture which has never before been seen at any selling center in South Africa. The fleece of the ram called Perfection weighed 29½ pounds, though only of ten months' growth, the ram himself being sold for £1250. This wool is not more than super 60's quality, but it is really typical of its kind, the staple being four inches long, and the crimp quite distinct from root to tip. Even the belly wool is almost as good in quality as other parts of the fleece, the length being fully two inches. The twelve months' fleece from another ram called Marmion II weighed 28½ pounds. The shoulder wool is nearly four inches long, and the wool from the sides is quite as good in quality, while the britch, which is four inches long, would produce a Bradford 60's warp top.

#### CHINA.

From the American Consul General at Tientsin, we have received through the Consular Service the subjoined interesting report on wool and sheep in China.

China wools are divided into three distinct grades, known to the trade as strictly combing, semi-combing, and filling wools. Hsining and Szechuen wools comprise the bulk of the strictly combing and semi-combing wools. Mongolians, Hatta, Woosie, Ball, Kinchow, Liangchow, Hsihtsui, Shansi, Kalgan, and Manchurian make up the greater portion of the filling wools. Practically every province north and east of the Yangtze River produces wool to a certain extent, Mongolia, Manchuria, Kansu, and Szechuen growing the largest quantity.

The wools from China vary widely in length of staple, quality, color, and scoured yield, and are used principally in the manufacture of carpets. Most of them are fair working wools, but without elasticity or springiness; the yarn, therefore, being lean and flat.

It is impossible to obtain any reliable statistical information about the actual production of wool, or the number of sheep in this country. The only approach to an estimate of such production is arrived at by the wools which pass through the customs barriers for export to other countries of which the Chinese Maritime Customs compiles statistics. According to these returns approximately 40,000,000 pounds a year are exported from the entire country. Regarding the quantity consumed locally, it is impossible to arrive at a definite estimate. Exports of wool abroad, and declared exports to the United States, for 1916, 1917, 1918, 1919 were as follows:

## TOTAL EXPORT ABROAD OF WOOL FROM TIENTSIN.

	1916.		1917.	
	Pounds.	Value.	Pounds.	Value.
Camels' wool .....	4,088,400	\$882,201	4,430,533	\$1,318,207
Goats' " .....	1,550,533	326,369	1,716,533	472,747
Sheep's " .....	33,140,133	6,430,636	33,717,466	8,481,022

	1918.		1919.	
	Pounds.	Value.	Pounds.	Value.
Camels' wool .....	5,929,466	\$2,179,623	4,809,066	.....
Goats' " .....	1,552,400	504,062	2,142,400	.....
Sheep's " .....	37,927,333	11,416,966	37,370,133	.....

## DECLARED EXPORTS TO THE UNITED STATES FROM TIENTSIN.

	1916.		1917.	
	Pounds.	Value.	Pounds.	Value.
Camels' wool .....	1,962,116	\$705,592	2,050,135	\$1,021,208
Goats' " .....	942,616	244,659	.....	.....
Sheep's " .....	28,183,366	7,630,886	24,700,186	11,580,882

	1918.		1919.	
	Pounds.	Value.	Pounds.	Value.
Camels' wool .....	1,363,232	\$897,879	2,003,200	\$1,364,253
Goats' " .....	256,647	147,254	284,350	227,044
Sheep's " .....	35,049,272	14,341,073	28,889,946	9,514,258



The wool is raised under very primitive conditions. The flocks are small ranging in number from fifty to two hundred, the latter being the extreme maximum. The sheep are given practically no care. In the vast majority of flocks no attention whatever is paid to them, and they receive no fodder in addition to the scant pasturage, not even during the winter season, which reduces the quality of the wool.

The wool is collected from the farmers, as in other wool producing countries, and transported to one of the numerous central markets, which are scattered throughout the wool producing provinces; in this district the wool is purchased from the individual producers by agents of Chinese wool dealers and representatives of compradores acting for foreign firms. Waterways, ox-carts, and camel caravan are the chief means of transportation; the cargo is usually months in transit before it reaches its final destination at point of export.

Upon the arrival of the wool in Tientsin brokers representing the dealers and the compradores sample the various parcels to the different foreign firms, and the stock is eventually sold to the highest bidder. It is then necessary to select and grade the wool, after which the combing and semi-combing wools are handshaken and the filling wools machine cleaned for the purpose of removing the foreign matter which often amounts to forty or fifty per cent. This is done in order to reduce freight charges. The stock is shipped in press packed bales averaging 500 pounds per bale.

The greater portion of the sheep's wool produced in this district is exported to the United States and Japan, whereas Great Britain takes the bulk of the camels' wool. Tientsin is the chief market and port of export, 90 per cent of the entire clip from China being shipped from this port. Practically all the other Chinese wools exported abroad pass through the port of Shanghai. Wool is the leading item of export from Tientsin to the United States.

There are no American or other foreign interests involved in the actual production of wool; there are no foreign owned or operated ranches. Several attempts have been made at times by various foreign concerns as well as the experimental farms maintained by the provincial governments of Chihli and Shansi to bring Montana and Australian sheep into this region for breeding purposes but the ventures have thus far proved complete failures as there are no facilities available for the proper raising of sheep.

The President of China has appointed Liang Shih Yi President of the newly created Wool and Leather Industries Commission. Its duties among others will be to ascertain the quantity and kinds of wool and leather required by foreign countries; to introduce and to encourage scientific stock raising; select and purchase the best domestic and foreign breeds of cattle and sheep which are to be sold at cost to breeders; train technical assistants for cattle and sheep raising and wool and leather making and also to study the methods of providing for hygienic conditions for domestic animals; establish breeding farms, wool, and leather factories; devise methods of inspecting the quality of wool and leather for export; gather information and receive reports on wool and leather industries from different provinces; to translate foreign technical books and to publish magazines



and bulletins concerning these industries, and to send out parties of experts to lecture in cattle and sheep-raising districts to hasten the development of the wool and leather industries.

It was announced during the year that a China-Japanese organization had been formed to promote sheep raising in Mongolia, where it was stated the company intends to raise sheep on a large scale on 135,000 acres of land in inner Mongolia.

#### JAPAN.

The report of the Japanese Department of Agriculture and Commerce for 1919 states that there were 4546 head of sheep in Japan in 1919. In 1917 the number was placed at 3192.

The Government and the people believe that suitable measures must be taken to grow an adequate supply of wool at home. The war and the difficulties experienced in getting a supply of wool has been the incentive. The Diet voted in 1918-1919 to import in 1918 1500 sheep and distribute them among government and private pastures, and each year it is proposed to make importations. Three yen are granted per head to farmers who keep sheep and aid is given to persons engaged in breeding sheep. Although many difficulties must be overcome it has been estimated that in ten years Japan will be self supporting in wool, but progress so far has been comparatively slow.

The report of the Japanese Department of Agriculture and Commerce in 1919 stated that the number of power looms in Japan in 1918 was 6732 and of hand looms 5018. The production was given as follows: Mousslain 45,830,000 yards; flannel 970,517 yards; serges 12,032 yards; blankets 1,004,333 kin, and woollen cloth 7,648,292 yards, with a total value of 85,938,320 yen.

Respecting the prospects of the Japanese wool manufacture Winchcombe, Carson, Limited, in their *Annual Review* for 1920 say: "The woollen manufacturing business in Japan has made wonderful strides of late years."

On this point General B. F. Enslin, Chief Division of Sheep and Wool in the Department of Agriculture of the Union of South Africa, says in his recent report on the wool industry: "Owing to the cost of production in Japan being much cheaper than in any other manufacturing country she has been able to outbid all competitors for worsted wools, particularly the high class clips. There is a good deal of evidence that the Japanese wool trade will expand and that she will ultimately become one of the most important manufacturing countries in the world."

The New South Wales Commercial Commissioner in the East has reported to his Government that the Japanese "have formed a textile Manufacturers Association and have agreed that no further purchases of wool shall be made by any mill in Japan until present stocks are used up. The Government has also agreed that no purchases shall be made outside Japan until stocks held by the mills are consumed. It is estimated that Japan has still sufficient wool in stock to carry on for the best part of a year. Under these circumstances Japan will not, I fear, be very prominent at the Australian wool sales during the remainder of this year and the early part of next year."

## THE RIVER PLATE.

The quantity of wool produced in Argentina and the number of sheep in that country are moot questions. According to official census figures there were in June, 1917, only 45,000,000 sheep, not including lambs, in Argentina, to which if the lambs of the next season be added the total flock would amount to 60,000,000 head. In December, 1913, the sheep and lambs of the country were estimated to number 81,485,000. It does not seem possible that the census figures can be correct because, although there may have been a loss in sheep in recent years, the statistics of the exports of wool do not indicate so great a reduction in the flocks. For the eight seasons ended September 30, 1920, the exports of Argentine wools were as follows :

	Bales.		Bales.
1912-13.....	310,933	1916-17.....	348,226
1913-14.....	305,606	1917-18.....	288,051
1914-15.....	304,517	1918-19.....	283,066
1915-16.....	299,207	1919-20.....	305,524

an average of 305,641 bales per annum. This is nearly the exact number of bales exported in the season 1919-1920. Therefore, it is a question whether the production of Argentina has decreased in anything like the proportion that the sheep figures quoted would indicate.

The imports of these wools into the United States for a series of years are given in the following tables. In recent years there was a great increase in imports of wool from these countries, but in the season of 1919-20 there was a large falling off from the imports of the preceding year. The last year marked a noticeable reduction in our imports from Argentina, but the imports from Uruguay of Class I wools were the largest on record, and the total of all classes is the largest shown in the table.

IMPORTS OF ARGENTINE WOOLS INTO THE UNITED STATES FOR THE YEARS  
1906-1920, INCLUSIVE.

Fiscal Year.	Class I.	Class II.	Class III.	Total.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1906.....	36,352,480	.....	5,815,447	43,167,927
1907.....	19,247,683	94,866	3,852,659	23,195,208
1908.....	14,311,508	.....	1,909,787	16,221,295
1909.....	51,601,420	106,239	6,672,175	58,379,834
1910.....	27,331,068	37,799	3,713,317	31,082,184
1911.....	14,014,295	96,326	3,780,755	17,891,376
1912.....	23,049,591	.....	4,572,037	27,621,628
1913.....	24,393,428	.....	2,349,156	26,742,584
1914.....	36,301,837	396,980	5,577,725	42,276,542
1915.....	67,076,718	90,212	10,641,323	77,808,041
1916.....	111,253,529	3,239,552	14,670,272	129,163,353
1917.....	185,446,149	7,769,359	14,754,584	207,970,092
1918.....	162,046,754	3,838,542	15,269,279	181,154,575
1919.....	121,579,497	1,181,355	16,690,943	139,451,795
1920.....	129,770,054	2,348,288	7,107,578	134,225,920

IMPORTS OF RIVER PLATE WOOLS (IN BALES<sup>1</sup>) INTO THE UNITED STATES  
FOR PAST TEN SEASONS, OCTOBER 1 TO SEPTEMBER 30.

Seasons.	Argentina.	Uruguay.	Total.
1910-11 .....	18,565	718	19,283
1911-12 .....	32,396	5,062	37,458
1912-13 .....	25,876	2,766	28,642
1913-14 .....	34,779	10,522	45,301
1914-15 .....	103,070	15,157	118,227
1915-16 .....	152,330	10,080	162,410
1916-17 .....	225,467	46,078	241,545
1917-18 .....	209,528	17,139	226,667
1918-19 .....	132,866	61,875	194,741
1919-20 .....	75,944	38,003	113,947

<sup>1</sup> The average weight of the bale is about 420 kilos. A kilo equals 2.2046 pounds.ARGENTINA WOOL SHIPMENTS (IN BALES<sup>1</sup>) TO OVERSEAS DESTINATIONS FOR TEN  
SEASONS, OCTOBER 1 TO SEPTEMBER 30.

Seasons.	Dunkirk.	Antwerp.	Hamburg. Bremen.	Italy.	United Kingdom.	United States.	Bordeaux. Marseilles.	Havre.	Holland.	Trieste.	Various.	Total.
1910-11..	133,768	41,713	102,926	4,034	59,276	18,565	3,348	2,611	3,929	...	12,833	383,003
1911-12..	91,655	40,121	121,480	6,065	46,871	32,396	1,895	2,291	2,391	3,878	6,795	355,438
1912-13..	64,765	30,668	103,257	6,093	63,274	25,876	980	4,287	2,637	5,362	3,734	310,933
1913-14..	72,551	36,723	85,193	6,120	43,255	34,779	1,940	7,384	2,678	6,881	8,102	305,606
1914-15..	100	.....	.....	47,672	77,319	103,070	45,737	1,793	9,639	.....	19,187	304,517
1915-16..	1	.....	.....	41,491	32,098	152,330	21,782	11,501	11,697	.....	28,307	299,207
1916-17..	.....	.....	.....	32,286	33,988	225,467	27,928	9,577	7,517	.....	12,859	349,622
1917-18..	.....	.....	.....	21,835	6,226	209,528	13,109	10,725	150	.....	26,478	288,051
1918-19..	23,687	.....	.....	16,821	23,740	132,866	14,391	28,877	12,093	.....	20,917	283,066
1919-20..	71,997	42,044	26,777	19,222	44,266	75,944	1,311	3,731	12,828	.....	7,404	305,524

<sup>1</sup> The average weight of the bale is about 420 kilos. A kilo equals 2.2046 pounds.

Likewise it is a question whether the flocks have decreased in Uruguay within the last few years as rapidly as the figures given out as authentic would indicate. The figures accepted for 1915 were 25,000,000 and in 1919 they are announced as of the census of 1916 at 11,472,852; or if the former total was accurate, a loss of 13,527,148 in one or two years, which seems to be an incredible reduction in so short a time. Accepting the figures of shipment as fairly indicative of production, it does not appear that the sheep population has decreased so rapidly or so heavily. The average shipments for the five seasons, 1909-10 to 1913-14, inclusive, were 113,000 bales and in the next four seasons, 1914-15 to 1917-18, inclusive, which covered the war years, the average was 60,849 bales. The total shipments in the season of 1918-19 were considerably heavier than in the preceding season. Those for 1919-20 were 104,640 bales, or an average for the two years of 108,965 bales. These shipments may indicate decreased flocks and also decreased wool production, but not to so great an extent as the census figures for 1916 would lead one to conclude.

IMPORTS OF URUGUAYAN WOOLS INTO THE UNITED STATES FOR THE FISCAL YEARS 1906-1920 INCLUSIVE AS SHOWN BY REPORTS OF UNITED STATES DEPARTMENT OF COMMERCE.

Fiscal Year.	Class I.	Class II.	Class III.	Total.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1906.....	5,083,195	.....	3,995	5,807,190
1907.....	5,856,437	.....	174	5,856,611
1908.....	1,604,221	.....	.....	1,604,221
1909.....	5,759,852	.....	108,380	5,868,232
1910.....	8,768,627	.....	21,158	8,789,775
1911.....	711,525	.....	.....	711,525
1912.....	3,125,759	.....	91,229	3,216,988
1913.....	3,537,824	.....	181,049	3,718,873
1914.....	11,639,243	41,949	1,336,526	13,017,718
1915.....	16,561,154	18,334	18,135	16,597,623
1916.....	8,858,492	245,090	405,164	9,508,746
1917.....	34,710,261	.....	2,891,700	37,601,961
1918.....	17,488,372	90,383	830,256	18,409,011
1919.....	34,386,870	.....	6,720,795	41,107,665
1920.....	44,643,043	697,969	1,966,355	47,307,367

URUGUAYAN WOOL SHIPMENTS (IN BALES<sup>1</sup>) TO OVERSEAS DESTINATIONS FOR TEN SEASONS, OCTOBER 1 TO SEPTEMBER 30.

Seasons.	Dunkirk.	Antwerp.	Hamburg. Bremen.	Italy.	United Kingdom.	United States.	Bordeaux. Marseilles.	Havre.	Trieste.	Various.	Total.
1910-11 ...	34,358	23,127	39,301	3,013	5,098	718	664	3,496	.....	4,853	114,628
1911-12 ...	33,938	28,416	34,056	5,904	11,124	5,062	1,272	4,128	4,826	593	129,319
1912-13 ...	37,677	19,030	30,128	6,783	13,918	2,766	44	4,190	5,163	2,468	122,167
1913-14 ...	25,948	17,408	27,681	2,981	2,838	10,522	1,042	1,921	5,639	4,302	100,282
1914-15 ...	.....	.....	.....	44,767	1,004	15,157	673	.....	.....	11,175	72,776
1915-16 ...	.....	.....	.....	22,832	1,161	10,080	770	.....	.....	10,128	44,971
1916-17 ...	.....	.....	.....	10,665	1,729	46,078	1,675	253	.....	2,958	63,358
1917-18 ...	1,458	.....	.....	19,661	100	17,139	2,176	3,596	.....	19,621	62,293
1918-19 ...	16,910	3,908	.....	4,865	2,295	61,875	3,879	12,546	.....	22,465	113,291
1919-20 ...	.....	14,831	5,128	5,934	6,877	38,003	1,483	4,048	.....	11,426	104,640

<sup>1</sup> The average weight of the bale is about 420 kilos. A kilo equals 2.2046 pounds.

THE WORLD'S SHEEP.

Official figures for sheep and for wool production in the various countries of the world are difficult to obtain in ordinary times. They have been made doubly difficult by the war and the changed boundaries of former large and strong empires. Because of the breaking up of Austria-Hungary that country has been eliminated from the present table and the new countries of Czecho-Slovakia, Jugo-Slavia, and Poland have been inserted. Roumania's boundaries have been much enlarged while Russia, Germany, and Bulgaria have lost territory, and European Turkey, aside from Constantinople, has practically disappeared. Owing to the confusion thus caused and the chaotic condition of Russia, which apparently has lost a large part of Poland, Finland, Esthonia, Latvia, Lithuania, and the Ukraine, it has been impossible to get official figures from any of them. Doubtless some duplication has resulted, and allowance must be made for it. In another year more satisfactory estimates may be secured from those countries not included by name in the list and from those whose agricultural and pastoral departments have been organized.

The total number of sheep in the world as estimated a year ago was 579,922,933. This year the figures are 566,235,117.

# 110 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

## NUMBER OF SHEEP IN THE WORLD ACCORDING TO THE LATEST AVAILABLE REPORTS AND ESTIMATES.

Country.	Year.	Number of Sheep.
<b>NORTH AMERICA:</b>		
United States: Continental.....	1920	<sup>1</sup> 45,067,000*
Noncontiguous, except Philippine Islands:		
Hawaii .....	1910	77,000**
Porto Rico.....	1910	6,000**
Alaska .....	....	200
Total United States.....		45,150,200
Canada .....	1919	3,421,958**
Newfoundland .....	1911	98,000*
Mexico .....	1920	300,000
Guatemala .....	1915	383,000**
Other Central America.....	....	124,000
Cuba .....	....	10,000
British West Indies.....	....	28,000
Dutch     "     " .....	....	22,600
Guadeloupe.....	....	11,700
		4,399,258
Total North America.....		49,549,458
<b>SOUTH AMERICA:</b>		
Argentina.....	1920	45,800,000**
Brazil .....	1916	7,205,000**
Bolivia .....	1913	<sup>2</sup> 1,750,000*
Chile.....	1917	4,182,910**
Colombia .....	1915	<sup>2</sup> 164,000*
Uruguay .....	1916	11,472,852**
Paraguay .....	1918	600,000*
Venezuela.....	1912	177,000**
Falkland Islands .....	1915	691,000**
Other South America .....	....	300,000
Total South America.....		72,342,762



NUMBER OF SHEEP IN THE WORLD, ETC. — *Continued.*

Country.	Year.	Number of Sheep.
<b>EUROPE :</b>		
Belgium.....	1920	126,202
Bulgaria.....	1919	6,729,250
Czecho-Slovakia .....	1919	1,346,000*
Denmark, Iceland, and Faroe Islands....	1919	1,271,262*
Finland .....	1920	<sup>1</sup> 1,070,000*
France .....	1918	9,496,315**
Germany .....	1919	<sup>1</sup> 5,373,402**
Greece .....	1918	4,795,597**
Hungary ..	1913	5,123,271**
Italy .....	1914	13,824,000**
Jugo-Slavia.....	1920	9,771,985**
Netherlands .....	1919	437,000**
Norway .....	1918	1,207,923**
Poland .....	1919	2,300,000*
Portugal.....	1906	3,073,000**
Roumania .....	1916	7,811,000**
Spain .....	1920	30,000,000*
Sweden .....	1919	<sup>1</sup> 1,563,654**
Switzerland.....	1919	263,729**
United Kingdom, including Isle of Man, etc.	1920	23,314,671**
All other Europe, except Russia and Turkey	....	20,000
Total Europe, except Russia and Turkey.....		128,918,261
Russia in Europe, old boundaries .....	1914	42,108,000**
Total Europe, except Turkey .....		171,026,261
<b>ASIA :</b>		
British India :		
British Provinces.....	1914	23,016,000**
Native States.....	1914	<sup>2</sup> 8,306,000**
Total.....		31,322,000
Ceylon .....	1915	90,000**
Cyprus .....	1916	282,000**
Japan .....	1919	4,546**
Philippine Islands .....	1915	129,000
Russia in Asia .....	1914	37,753,000**
Turkey in Asia.....	1912	27,095,000
Other Asia.....	....	60,000
Total... ..		65,413,546
Total Asia .....		96,735,546

## 112 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

NUMBER OF SHEEP IN THE WORLD, ETC. — *Concluded.*

Country.	Year.	Number of Sheep.
<b>AFRICA :</b>		
Algeria .....	1912	8,338,000**
Basutoland .....	1919	1,369,000**
British East Africa .....	1915	6,555,000**
Egypt .....	1916	688,000**
German East Africa .....	1915	6,440,000**
German South West Africa .....	1913	555,000**
Madagascar .....	1911	168,000
Morocco .....	1916	4,954,000**
Rhodesia .....	1911	300,000**
Soudan (Anglo-Egyptian) .....	1909	830,000
Tunis .....	1916	1,148,000**
Uganda Protectorate .....	1914	542,000
Cape of Good Hope }	1919	34,227,085**
Natal }		
Orange Free State }		
Transvaal }		
All other Africa .....	....	3,000,000
Total Africa .....		69,114,085
<b>OCEANIA :</b>		
Australia .....	1919	83,542,499**
New Zealand .....	1919	23,914,506**
Total Australasia .....		107,457,005
Other Oceania .....	....	10,000
Total Oceania .....		107,467,005
Total World .....		566,235,117

<sup>1</sup> Includes lambs.<sup>2</sup> Includes goats.<sup>3</sup> Iceland and Faroe Islands, year 1914.

All figures without asterisk are estimates based on best information obtainable.

\* Figures designated thus are official estimates from the countries covered.

\*\* Figures designated thus are from official census or other reports from the countries covered.

## WOOL PRODUCTION OF THE WORLD.

COUNTRY.	WOOL.
	<i>Pounds.</i>
North America:	
<sup>1</sup> United States.....(1920)	302,207,000
British Provinces.....	24,422,531
Mexico.....	1,200,000
Total North America.....	327,829,531
Central America and West Indies..	750,000
South America:	
Argentina.....	308,560,000
Brazil.....	35,000,000
Chile.....	26,000,000
Pern.....	9,420,000
Falkland Islands.....	3,200,000
Uruguay.....	100,000,000
All other.....	5,000,000
Total South America.....	487,180,000
Europe:	
Belgium.....	641,010
Bulgaria.....	17,802,365
Czecho-Slovakia.....	5,952,420
Denmark.....	3,508,000
Finland.....	3,250,000
France.....	50,000,000
Germany.....	37,278,242
Greece.....	16,000,000
Hungary.....	25,516,000
Italy.....	35,000,000
Jugo-Slavia.....	48,859,000
Norway.....	7,247,000
Poland.....	6,724,030
Portugal.....	6,500,000
Roumania.....	13,227,600
Spain.....	218,196,000
Sweden.....	5,354,000
Switzerland.....	1,049,000
United Kingdom.....	99,000,000
Russia—Estimated.....	150,000,000
Total Europe.....	751,104,667
Asia:	
British India.....	60,000,000
China.....	50,000,000
Persia.....	12,146,000
Russia in Asia.....	113,359,000
Turkey in Asia.....	90,000,000
All other.....	1,000,000
Total Asia.....	326,505,000
Africa:	
Algeria.....	33,184,000
British So. Africa.....(1919)	170,000,000
Tunis.....	3,735,000
All other.....	13,000,000
Total Africa.....	219,919,000
Oceania:	
Australia and Tasmania.....(1919)	647,057,969
New Zealand.....	204,964,515
Total Australasia.....	852,022,484
All other.....	100,000
Total Oceania.....	852,122,484
Total world.....	2,965,410,682

<sup>1</sup> Estimate of the U. S. Department of Agriculture.

A surprisingly large increase based on estimates regarded as reliable and the best obtainable has been made both in the number of sheep and wool production of Spain. The total wool production of Spain is placed at 218,196,000 from 15,000,000 merinos, 2,000,000 medium grade Andalusian sheep, 8,000,000 coarse wool sheep, and 5,000,000 ordinary varieties.

We append a table, by the courtesy of Manger & Avery, showing the shearing times in the important wool producing countries, and a table showing the average weight of foreign wools coming to our wool markets.

JOHN BRUCE MCPHERSON,

*Assistant Secretary.*



## AVERAGE WEIGHTS OF BALES OF FOREIGN WOOLS.

We print below the average weights of the various bales of wool as they come to market, for which information we are indebted to the courtesy of Mauger & Avery, the well-known wool merchants of Boston. It is information not infrequently desired and will be appreciated by all students of the industry :

Africa :		
Cape —		
Scoured .....	210	pounds.
Greasy .....	370	"
Mohair .....	500	"
Asia :		
China .....	500	"
Asiatic .....	330	"
East India.....	330	"
Turkey.....	200	"
Turkey Mohair .....	210	"
Europe :		
United Kingdom —		
English Squares.....	700	"
Scotch Bags.....	225	"
Oceania :		
Australian Scoured.....	250	"
“ Greasy.....	330	"
South America :		
B. A. & M. V. —		
Greasy .....	1,000	"
Scoured .....	800	"
South America, West Coast —		
Peruvian, Washed.....	180	"
“ Unwashed .....	230	"
Chile, Unwashed .....	580	"
Punta Arenas .....	450	"

In addition to the foregoing we have secured from the Massachusetts Storage Warehousemen's Association of Boston the following information, based on their many records in storing wools, concerning the weights of bales and bags of greasy wool and scoured, foreign and domestic :

Domestic bags, grease,	range from	195 to 368	pounds.
Domestic bales, “	“	288 “ 521	“
Domestic scoured bags and noils, “	“	97 “ 132	“
Domestic scoured in bales, “	“	267 “ 385	“
Cape, grease, bales, “	“	288 “ 429	“
“ scoured, “	“	155 “ 213	“
East India, scoured “	“	339 “ 362	“
Peruvian large bales, computed weight for storage,	“	235	“
“ medium “	“	165	“
“ small “	“	144	“



## Obituary.

### GEORGE GILBERT DAVIS.

GEORGE GILBERT DAVIS, for more than twenty years the Treasurer and leading spirit of the well known Davis & Furber Machine Company, North Andover, Massachusetts, died at his home in that place on Thursday, September 30, aged seventy-six years, having been in declining health since the early summer.

He was born in North Andover in 1844, the second of the twelve children of George L. and Harriet Roberts Davis, being a direct descendant in the eighth generation of William Davis, who was of Roxbury in 1642. After fitting for college in the schools of Andover and Phillips Academy he entered the Lawrence Scientific School at Harvard, from which he was graduated in 1865.

Trained in the mechanical arts he was for twelve years after his graduation a member of the firm of Davis & Furber, of which his father was treasurer and principal owner. In 1880 he gave up his position as superintendent of the card clothing department and formed a partnership with Mr. Charles Whitney, his father-in-law. The firm of Charles Whitney & Company was a successful banking house in Boston and Mr. Davis' connection with it was both pleasant and profitable and would have continued except for his father's wish to have his son associated with him. Because of that wish Mr. Davis renewed his business association with his father, after whose death in 1891 he was made President of the Company, serving in that capacity from 1892 until 1896, when he was elected treasurer, which office he held continuously until his death—a period of twenty-eight years.

It was not given to him to create an industry; his was the difficult task of taking an industry already created and already successful and of so conducting it that it became, year by year, more successful. The growth under his direction was steady, consistent, and healthy. Always jealous of the good name of the firm two of his cardinal principles were, to keep the business dealings of Davis & Furber up to the high standard set by his father before him, and to have everything made by his Company generally recognized as the best of its kind.

To the very last his Company was his great interest; he was content and anxious to leave a prosperous industry as his monument. Resources which he might easily have withdrawn he gladly left in, in order to make just so much easier the task of those who were to

follow him. He was especially interested in the large new factory building just completed. This building, like the foundry and card erecting shop before it, was built under his supervision, although he did not live to see it in use.

A man of progressive ideas, Mr. Davis was an exceptionally able executive, and possessed to a remarkable degree the faculty of inspiring others to industry. The method and the system which marked his private life he carried to his office desk with the result that whatever business was before him was transacted expeditiously and efficiently.

The growth which the Davis & Furber Machine Company enjoyed under his direction was not confined to increased factory facilities and larger production. He was as much concerned with the environment of the shop as he was with the shop itself, adding largely to the concern's real estate holdings, and personally making sure that all the houses were kept in the best of condition. Much of the attractiveness which marks the property in the neighborhood of the plant is due to his interest in the living conditions surrounding his employes.

Despite his efforts on behalf of the workers, Mr. Davis was not a mixer in the ordinary sense of the word. But, withal, he was genial and genuinely friendly to all who were acquainted with him. Neither was he a philanthropist as philanthropy is today generally understood, but he was exceedingly generous once his sympathies were enlisted. To Abbot Academy in Andover, of which he was a trustee, he gave Davis Hall and the Davis Fund as a memorial to his father. He was always actively interested in the North Andover Congregational Church, with which his father was so long identified. He supported it financially, and gave liberally to its endowment fund. Soon after his death Mrs. Davis, in accordance with his expressed wish, made a gift to the Stevens Memorial Library of North Andover to establish the Charles Whitney Davis Fund in memory of their only son.

In 1876 he was married to Ada M. Whitney, daughter of Charles Whitney of Boston. She died December 28, 1920. Two daughters, Mrs. George H. Powers and Mrs. George W. Simpson, both of Boston, and four grandchildren, and one sister, Mrs. A. Albert Sack of Providence, survive. Mr. Davis' only son, Charles Whitney Davis, died in 1897, when sixteen years old.

Besides his summer homes in North Andover and in Kennebunkport, Maine, Mr. Davis had a residence at 316 Beacon Street, Boston, where he lived in the winter.

He was a member of the Union and Algonquin Clubs of Boston, as well as many other organizations.

## LUCIUS J. KNOWLES.

LUCIUS J. KNOWLES, President of the Crompton & Knowles Loom Works, and for 17 years past one of the leading figures in the business and industrial life of Worcester, died at 4 o'clock on the morning of November 26th, at the Ritz Hotel in London. He was 41 years old. Meningitis, following a brief illness from influenza, was given as the cause of his death.

News of Mr. Knowles' death was a surprise and shock to his many personal and business friends, few of whom knew that he was not in the best of health. He left Worcester November 2nd on a brief business trip to England and France and was to have sailed for home Thanksgiving Day.

Mr. Knowles was born in Worcester, April 6, 1879, the son of Francis Bangs and Hester A. (Greene) Knowles. He was named for his uncle, Lucius J. Knowles, who, with his father, started in 1866 the manufacture of looms in a little shop, which afterward developed into the present great business enterprise. Mr. Knowles' uncle, Lucius, was the mechanical genius of the family, while his father, Francis B., handled the business end of their joint enterprise with a conspicuous talent, which was inherited and cultivated by the son.

The Knowles family was among the early settlers of New England. Richard Knowles was married in Plymouth in 1639 and removed to Eastham, where the ancestors of the Worcester branch of the family for several generations took a prominent part in the development of the Cape Cod district.

Mr. Knowles received his early education in Worcester schools and was fitted for college at Dalzell Preparatory School and Worcester Academy, from which he was graduated in 1898. He entered Harvard University with the class of 1902, but left the university at the end of his junior year.

On December 1, 1903, he became associated with the business that his father and uncle had established, the Crompton & Knowles Loom Works, now the largest industry of its kind in the United States. He was treasurer of the company from 1906 to 1917. During this period he was also its vice president and he took an active and energetic part in the direction of the company's affairs. In February, 1917, Mr. Knowles succeeded Charles H. Hutchins as president of the corporation.

In connection with the expansion of the business, through the acquisition of several other concerns, Mr. Knowles played an important part in systemizing the business and in bringing it to its present condition where its product is known and sold the world over. The history of Crompton & Knowles Loom Works has been

marked by steady growth and consistent, healthy prosperity, and these characteristics of the business were never more pronounced than during the time in which Mr. Knowles had an active part in the management. He held a deep and lively interest in the welfare of the employes of the big concern of which he was the head, that interest being demonstrated in many practical ways.

Mr. Knowles was a director of several concerns and was prominent in club life of Worcester and surrounding cities. Among his clubs were the Worcester Country Club, the Grafton Country Club, the Tatnuck Country Club, the Quinsigamond Boat Club, the Myopia Hunt Club of Hamilton, the Essex Country Club of Manchester, the Harvard Clubs of Worcester, Boston, and New York, the Boston Athletic Association and the Brookline Country Club. He was recently re-elected a director of the Home Market Club.

Mr. Knowles was married April 6, 1904, to Laura McGinley, daughter of John Rayner McGinley, of Pittsburg. There are two children, Lucius James, Jr., born in London, and Sarah Montgomery. Mr. Knowles also leaves two sisters, Mrs. Homer Gage of Worcester and Mrs. George E. Warren of Boston.

Mr. Knowles was vigorous, alert and keen of vision. To the great industrial enterprise he headed he gave increased vitality because he possessed the qualities of the executive. He put his hand to things with the fixed conviction that they could and should be accomplished. He died in comparative youth, before his full stature had been recognized as it would have been, and his going will be felt in the business circles of his city and this Commonwealth.

#### H. EARLE MABBETT.

H. EARLE MABBETT, Treasurer of the George Mabbett & Sons Company of Plymouth, Massachusetts, and a son of the late George Mabbett, who died August 20, 1920, died after a short illness on December 5, 1920. He was born at Oocom, Connecticut, December 30, 1872, and started in the wool manufacture with his father when sixteen or seventeen years old, going later, after getting a few years of experience, to the Philadelphia Textile School for his technical training. When his father started the Standish Worsted Mill he became its designer, later becoming assistant to his father and holding that position until the mill was sold. He was its agent until the formation of George Mabbett & Sons Company in June, 1900, at which time he became treasurer of the corporation and remaining so until his death. He was president of the Plymouth Country Club and director and vice-president of the Old Colony National Bank of Plymouth. Mr. Mabbett is survived by a widow and two daughters.

## Editorial and Industrial Miscellany.

### THE ECONOMICS OF THE FABRIC BRANDING ADVOCATES.

MR. W. W. REYNOLDS, an Ohio wool grower who is most active in his support of the French compulsory branding bill, apparently believes and makes it his main contention that the misfortune which has befallen the wool growers not only of the United States but the world, and which have likewise been experienced by the wool dealers and manufacturers, can all be traced to the use of unidentified shoddy in the making of woollen cloths. He makes no allowance for the general and sudden fall of prices the world over. The high rates charged for the use of money, the freight congestion which seriously interfered with transportation last spring and early summer, the "don't buy" campaign carried on by Government officials for months, the difficulty of getting wool to market during the war which caused huge quantities to be piled up in the producing countries of the world, the cancellation of millions upon millions of dollars' worth of contracts, the curtailment of machinery, and the lessened consumption of wool in the world's manufacturing countries. All these and other causes Mr. Reynolds calmly ignores and, speaking with an air of authority that he assumes cannot successfully be questioned, he declares that one cause and only one cause has brought about stagnation in the wool market.

Mr. Reynolds seems to have also overlooked the fact that the prices for many other commodities beside wool have fallen rapidly and heavily; and with these depressed prices the use of unidentified shoddy or reworked wool has had nothing whatever to do. A few cases of commodity price depression which cannot be attributed to the unbranded use of reworked wool may be cited.

Between October, 1919, and October, 1920, the price of copper fell from 26 cents to 16.25 cents a pound and in November the prices declined to a level of 3.23 cents below the average price for electrolytic copper for the past twenty years and within three cents of the record low price made in 1902. Hides fell from 48 to 25 cents a pound. Hogs declined from 14.35 to 12.60 cents a pound. Cotton prices declined from 35 cents to 18.25 cents a pound. Rubber dropped from 51 to 20 cents a pound. Sugar fell from 7.28 to 6.51 cents a pound, and between May and October, 1920, the drop was



from 21.57 to 6.51 cents a pound. Wheat dropped from \$2.65 a bushel in October, 1919, to \$2.22½ a bushel a year later, and the fall has been continuing since the latter date. Let Mr. Reynolds compare these losses with those the French bill is to correct. Within the same period, Ohio fine delaine wools declined from \$1.98 to \$1.30 per pound, scoured basis, and Ohio quarter blood declined from \$1.10 to 60 cents a pound, scoured basis.

Here are some more cases of declining prices of farm products. The *Market Reporter* of November 27, 1920, had the following to say about the lower prices quoted for sweet potatoes.

The trend of prices this season has been slowly and steadily downward. Early jobbing sales of good Virginia yellow stock in Eastern cities were at \$7 to \$10 per bbl. during the last half of August. By the middle of September, the price had declined to a range of \$5 to \$7. The second week in October, the range was \$3 to \$4 in Eastern markets.

Of sweet and red clover seed, it said:

The market drop in seed values may be accounted for in a large measure by the general price decline being experienced by other commodities. . . . Growers were being offered \$16 to \$10 per 100 lbs. for clear medium red clover seed during the week ending November 13, as compared to about \$45 at a corresponding time last year.

A prominent farm publication estimates that the value of the oats crop shrank \$303,000,000 between July 1, and October 4; that the value of the cotton crop shrank \$523,000,000 between July 1, and October 4, and the value of the wheat crop shrank \$732,000,000 between July 15, and October 8.

No one, not even Mr. Reynolds, will have the hardihood to assert that these marked declines in the prices of the commodities named have been due to the use of unidentified shoddy or reworked wool, to which cause alone Mr. Reynolds and Mr. Alexander Walker, President of the National Sheep and Wool Bureau, attribute the slump in wool prices. If all prices have declined generally for all commodities, must there not be some common cause or causes, more general in their influence than the use of reworked wool, which have produced the depressing effect? Mr. Reynolds should remember, too, that manufacturers have been sharers with the wool growers in the consequences of the very hasty deflation which has taken place during the past six months, and have experienced losses commensurate with those suffered by the wool growers.



Undeniably the wool growers produced their clip under very high costs, so high, in fact, that the prices at which their wool can be sold are perhaps below the cost of production. In this particular, however, the wool grower is not the only unfortunate man. To leave the wool industries for a moment, there is a familiar ring in reports from other industries. A recent article in the *New York Commercial* respecting quicksilver, says:

The recent sharp declines in the price of quicksilver which have brought the market for this important material to the lowest level since the outbreak of the European war are said to have made the price in the New York market lower than the present cost of production.

The *New York Journal of Commerce* of November 19 had the following to say anent the prices for turpentine and rosin:

With turpentine selling at close to \$1 per gallon and rosin down to \$11.50 for all grades excepting the water white, it is generally believed that there will be some reaction in the near future, and consumers are being urged to take on supplies at the present levels. One of the main arguments advanced by the trade in support of their contention is that with both turpentine and rosin selling at far below the levels of the recent past, the producers are unable to operate at a profit.

The *New York Commercial* of November 18 had the following to say concerning the prices for corn starch:

The reductions which have occurred in corn starch during the past few months have in the opinion of leading traders in the material, brought the price level to a point where further reductions on the part of the large producers are out of the question. It is generally felt in the trade that any further reductions would bring the price of the material below production costs.

Without doubt prices of all farm products have fallen heavily and perhaps more in proportion than other prices, the reason being that with its slow turnover farming is less capable of adjusting itself to rapid and great declines in values. It is most unfortunate that this decline was not spread over a longer period of time so that it could have been brought about gradually and moderately, rather than by a hasty perpendicular descent.

What industries are enduring now is the very unpalatable experience known as deflation. Mr. Reynolds cannot gain any useful end by using it to fan the graying embers of the compulsory branding propaganda. This deflation has come much sooner than was

expected, and many years sooner than the reaction following the Civil War; but it is exactly what many were clamoring for a year ago and what the power of the Department of Justice was used to help bring about. It must be endured with as much equanimity and fortitude as possible. It is a time for courage and sound thinking, not for paternalism, muddled reasoning, or untrustworthy conclusions drawn from false promises. As the *National Stockman and Farmer* said editorially in the issue of December 11:

The foundation for production is not so broad as it was last year in the case of sheep and hogs. Yet there are more consumers in the country than there were before the war. These facts ought to prevent stockmen from getting panicky and sacrificing their herds or flocks, their foundation for future production. Those who are compelled to sacrifice deserve our sympathy; but we haven't much respect for the business courage of those who sell out every time they face a business problem.

The *Ohio Farmer*, in its issue of November 6, gave the following sound advice to its readers:

In the readjustment that has been coming for some time and which seems now to have begun, all classes must accept some actual or potential losses. All will be benefited when the general effects reach them. Farmers justly feel that they are called on to bear a heavy loss when they are compelled to sell their products at lower prices and still pay the prices that are demanded by those who bought at high prices and who think they can not sell for less. All tradesmen will have to bring their prices down with the general decline just as all manufacturers will be compelled to make reasonable reductions. Farm finance has been hit by discrimination favoring mere speculators but we cannot agree with those who declare that unless certain special credit facilities are afforded agriculture will be bankrupt. It may be hard hit and possibly discouraged so that the consumer may feel the effects when production is shortened, but we have enough faith in the ability and integrity and loyalty of the American farmer to feel that he will be the last man to fail to meet the unusual strain that seems to be his lot and that he will come through with his bit in the way of production for public good as well as in the interest of his own business.

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#### MORE FRENCH BRANDING BILL PROPAGANDA.

GROSS MISSTATEMENTS BY HON. GEORGE M. WILBER.

THE Hon. George M. Wilber, of Marysville, Ohio, Chairman of the Executive Committee of the Ohio Wool Growers' Association, in his speech before the Conference of the Wool Committee of the

American Federation of Farm Bureaus at Chicago, on November 4, 1920, made so many incorrect statements about fabric branding legislation that we cite it, and discuss a few of the assertions as being typical of the campaign of ignorance and misrepresentation which has been conducted for months in all sections of the country by those who are pushing the so-called "Truth in Fabric" bill.

Mr. Wilber's friends are presenting him as a man equipped to fill the important post of Secretary of Agriculture, and it is well to investigate the depth of his knowledge, and the opinions he holds respecting the French-Capper bill for the compulsory branding of wool textiles. This is a measure which strikes at the whole wool manufacturing industry, while at the same time, if passed by Congress, it will not bring to the wool growers the relief its sponsors allege. In his address, Mr. Wilber admonished his hearers thus:

We must do some sound thinking. It is time for us to get down to fundamentals. We need a policy broad enough and sound enough to cover our entire proposition, to benefit others in a like position, and so wisely constructed that it will bring harm to no one.

Continuing, he said:

As I see it, there are three outstanding necessities of legislation which are imperative, and which should be taken up at Washington immediately on reconvening of Congress.

Pre-eminent in our legislative needs is an arrangement for European credits. The Old World is hungry and nearly naked. They need our food and our cheap raw wool.

Second, ninety-five per cent of Americans are wearing someone's cast-off garments in the shoddy clothes we are *forced* to buy. We want a Truth in Fabric bill passed by Congress, and to have it become operative as quickly as possible. The unrevealed presence of shoddy cloth is a crime, because the consuming public believes it is buying virgin wool cloth when told the garment is "all-wool." "All wool" means nothing, because the garment may truly be "all wool" and still be all shoddy or reworked wool and not carry a thread of virgin wool.

Woolen rags have increased in value 600 to 1200 per cent in the past three years, while there is practically no market for wool at any price at present. Not much wool is needed to hold the shoddy fibers together. No wonder there is no sale for pure wool. Let us have this measure providing for common honesty passed. Every person in America who wears cloth, and most of us wear some except a few of the ladies, is vitally interested in this measure. Over one-half million people are directly interested in the handling of sheep in the United States, and, while we are producing a vast quantity of wool, yet, in spite of that fact, at the present time we are growing only 50 per cent of the wool actually consumed

in the United States, or only 25 per cent of wool necessary where the consuming public getting the class of clothes they have a right to expect at the prices they are paying.

Mr. Wilber was a witness in behalf of the French bill at the hearings held by the House Committee on Interstate and Foreign Commerce. At that time he was greatly concerned about the interests of the general public, expressing the belief of the bill's supporters "that this bill is going to operate in the interest of the public generally, without question." Again he asserted that "the manufacturers ought to state what they are putting in the fabric which they are selling us, as a matter of justice." On November 4, less than six months later, Mr. Wilber was urging the passage of the French bill as one of "three pre-eminent needs of the wool growers."

If it is one of the wool growers' needs, it should be honestly avowed, and not declared to be urged in behalf of the public and as a matter of justice to the purchaser.

But the amazing thing about Mr. Wilber's speech is his broad, unqualified assertion that "ninety-five per cent of Americans are wearing someone's cast-off garments in the shoddy clothes we are forced to buy." This is not true, and Mr. Wilber, if he will do a very little "sound thinking," must realize how absurd it is. He must know, if he knows anything at all about this question, that the latest and only official figures—those collected by the Government, are contained in the Census of 1914, the Census of 1919 not yet being available; and he must know that what he states with so much emphasis and seeming authority, is purely a figment of his imagination and cannot be substantiated by him or any other person. These official figures of the census Mr. Wilber and his fellow advocates of the French bill refuse to accept, preferring to substitute for them fanciful estimates made by men who do not possess even rudimentary knowledge of the wool manufacturing industry. Apparently Mr. Wilber did not hear at those committee hearings, at which he testified, the admissions which Mr. Alexander Walker, President of the National Sheep and Wool Bureau, was forced to make by the Hon. Samuel Winslow, a member of the Committee.

On page 472 of the Report of those hearings, Mr. Walker accepted the statement of those opposing the French bill that worsteds made in this country contain no shoddy or reworked wool. On page 474 Mr. Walker, after much squirming and attempted avoidance of the issue, was forced to admit that about sixty per cent of all the wool cloths made in the United States are worsteds in which shoddy is

not used, and that only about ten per cent of the total production contains any shoddy or reworked wool. If Mr. Walker is right, what can be said of Mr. Wilber's assertion, unbacked by any authority whatever? If Mr. Wilber makes statements for which he knows there are no official authoritative figures—and he is doing that very thing—what credence can be given to any of his statements on moot questions?

Mr. Wilber is only a degree more careless than Mr. Alexander Walker, President of the National Sheep and Wool Bureau, who in his printed brief, presented to the Congressional Committee, made the confident assertion that "at least 66-2/3 per cent of the raw material used in apparel, including worsteds sold as all wool, is made from substitutes." The only difference between President Walker and Mr. Wilber is 28-1/3 per cent. and that is a small matter between men with no regard for facts in an argument. When once an advocate abandons available and trustworthy figures as a basis for his ideas he begins romancing, and if he is going to romance about such matters why stop short of an impressive figure? The facts do not serve the purposes of the French-Capper bill advocates. So much the worse for the facts.

Mr. Wilber not only made the foregoing exaggerated statement, but he has also blindly accepted, and used an unreliable and wholly misleading statement put out by the Secretary of the National Sheep and Wool Bureau, whose ignorance of wool manufacture is abysmal, and who is willing to make any assertion whatever if thereby he supposes a point may be scored in his propaganda campaign for the French bill.

The Sheep and Wool Bureau's Secretary, adopting a report issued by the American Consul at Leeds, England, concerning the advance of rags in the British market, suppressed the important fact printed in the report that English money was converted into money of the United States at *par*, although the rate of exchange was much against British money. This artifice enabled him greatly to exaggerate his percentage of increase, the amount depending upon frequent variations in the rate of exchange.

Mr. Wilber adopted this unwarranted statement without taking the trouble to verify it, and gave it publicity as though he himself had made the discovery—a step which no public man can be permitted to take without being held responsible for it. Even granting that Mr. Wilber himself did not intend to deceive by quoting figures without any basis on which to rest, his carelessness should not be allowed to pass for truth, and at least he must be held accountable for a gross blunder. It is quite on a par with that made by Mr.



J. F. Walker, of Ohio, concerning the cargo of rags which he, without investigation, concluded were to be used for the making of reworked wool, but which in reality were imported for paper stock!

We submit that the points in Mr. Wilber's speech to which attention is called do not indicate that he has followed the advice given his colleagues to "do some sound thinking." Rather they indicate that Mr. Wilber was more intent on making a point than on giving some constructive suggestions so badly needed to get all industries out of the business slough in which they are wallowing. The speech, if it is to be accepted as a criterion, does not seem to stamp Mr. Wilber as a man of the caliber needed for the Cabinet position, for which he is an aspirant.

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#### WHAT "THE COUNTRY GENTLEMAN" THINKS OF COMPULSORY BRANDING OF FABRICS.

No more sensible article on shoddy has appeared in any journal than the editorial in *The Country Gentleman* of November 6, which we commend to the careful attention of Messrs. Alexander Walker, J. F. Walker, George M. Wilber, and W. W. Reynolds, proponents of the French bill, and to the members of Congress with whom will rest the decision concerning the bill's future. *The Country Gentleman* holds no brief for the manufacturer, for its readers are in large part agriculturists scattered all over the United States whose favor the editor would be supposed to curry. His utterance, therefore, on this little understood matter is all the more to be received and relied upon by those who have been misled by the tempest in a teapot created by men with a plausible story of misfortune, and financial loss caused by wrong and injustice.

The editorial is as follows:

The public is getting all fussed up over shoddy and not without a good deal of reason, but the facts and the remedy are not so simple as they are assumed to be, so that the favorite expedient of applying to Congress for relief from every ill may not be as satisfactory as anticipated.

It seems to be the popular impression that all shoddy is bad and its use should be made difficult if not impossible, at least opprobrious, while all virgin wool is good and much to be desired.

The facts are that the value of wool for all textile purposes depends upon the length of staple and the strength of fiber, and sometimes, of course, upon the luster and degree of fineness, but that is quite beside the point at issue.

This being the case, there is a vast difference between virgin wools,



even between different portions of the same fleece. Some sheep have a fiber that is long, strong and lustrous, and all wool that comes from the back and sides is better than that from the flanks, belly or neck.

Again, if the sheep has been sick or if for a time it suffered from lack of proper feed or other cause, that unfortunate incident will be attended by a weak spot in the fiber which has grown at that particular time. There are therefore virgin wools and virgin wools.

It is the same with shoddy. Its value depends upon the grade of virgin wool from which it was made. The term has been made invidious in the public mind by evil associations; the expression "old rags," for example, being played up in such a way as to damn everything but virgin wool and to give that a clean bill of health, whatever its grade or quality.

The fact is that shoddy is a general term for reworked wool, so there is good shoddy and bad shoddy, just as there are good and bad virgin wools, and the other fact is that long-staple and strong-fiber wool is too valuable to be sacrificed after a single use. Such wools should be used over and over again, and there is no justification in speaking of all discarded fabrics as old rags in such a way as to suggest filth and unfitness.

The general situation is, therefore, that some shoddy is better than the lower grades of virgin wool, and that is why Congress or any other body is going to have its hands full in prescribing restrictions that will not do more harm than good.

### AN EXPERT'S VIEW OF THE FRENCH COMPULSORY BRANDING BILL.

THE American Sheep and Wool Bureau which is sponsoring the French compulsory branding bill for the want of something better to do, has issued reams of paper containing so-called arguments for the passage of that poorly disguised and ineffective measure. Noticing a communication from the Bureau's Secretary, which it published, the *Dry Goods Economist* for September printed an article entitled, "Light for the 'Virgin Wool' Advocates," which exposed the hypocrisy of this campaign and properly designated some of the Bureau's statements as "no less than silly." After calling attention to the Secretary's article and Mr. Alfred Whitman's reply, the article said:

#### LIGHT FOR THE "VIRGIN WOOL" ADVOCATES.

On page 13 of this issue of the *Economist* is printed a letter from Howard E. Greene, Secretary of the National Sheep and Wool Bureau of America, in which Mr. Greene explains the "Truth in Fabric" movement as he sees it and invites the *Economist* to "get aboard the band wagon," on the principle that "you can't fool all the people all the time."

We also print, on page 14, an analysis of which Alfred A. Whitman of William Whitman & Co., at our request, has made of statements contained in Mr. Greene's communication. Mr. Whitman is an authority on the subject discussed. He has represented the wool manufacturers at hearings on "pure fabric" bills, and the fact that his direct business interest is almost wholly in worsteds—in which no shoddy is used—gives his comments an additional value.

In responding to Mr. Greene's letter the *Dry Goods Economist* has this to say:

If the National Sheep and Wool Bureau of America were to come out flatfooted with the truth and say, "We are for the sheep man first and last. His interest is ours, and we propose to promote it," their propaganda would be entitled to a certain amount of respect. But that is not their course. They know well enough that the public as a whole is comparatively indifferent to the sheep man—however unfortunate this may be—and consequently they approach their work from the angle of protecting the outraged consumer of wool fabrics.

"The people, as a rule, want virgin wool clothing," says Mr. Greene. They want nothing of the sort. They want clothing that will wear well, look well and keep them warm or cool according to the season. Whether it is made of virgin wool, reworked wool, cotton or a mixture of all three means nothing to the average consumer. It is results he wants, and the experience of years is that "all virgin wool" is not necessary to produce them.

Textile manufacturers, according to Mr. Greene, are able to turn out "pretty" fabrics by using shoddy, and dare not give it up lest they be unable to produce hundreds of types of cloth. And why does the manufacturer turn out "pretty" cloths? Because people want them. Nothing is made for very long that people will not buy. Accepting at face value Mr. Greene's statement that manufacturers dare not give up "pretty" cloths it becomes pretty good evidence that consumers want them, shoddy or no shoddy.

Mr. Greene would and could be far more logical if he were to conduct a campaign of education among consumers, telling them the benefits of "all virgin wool" fabrics and urging them to content themselves with plainer weaves for the sake of more serviceable cloth. When he takes the tack that manufacturers are forcing inferior goods upon a desperate people madly crying for nothing but virgin wool he insults the intelligence of anyone with a modicum of gray matter. To suggest, as he does, that manufacturers and waste material dealers—"and a man is still a rag picker, even though a millionaire rag picker," says Mr. Greene—have entered into a conspiracy to defraud the public is no less than silly. Mr. Greene is an energetic publicity man and his newspaper education stands him in good stead, but his imagination needs to be kept under control.

Dishonesty in propaganda may be of two sorts. It may consist of direct mis-statement or of failure to explain the real meaning of statements which, taken literally, are true, but which when analyzed present a different face. In a circular letter calling attention to a bulletin of the Chamber of Commerce of the United

States and its remarks on the various bills affecting textile identification, Mr. Greene makes the statement that 29 witnesses appeared for the "Truth in Fabric" bills of Congressmen French and Rainey while only 20 persons appeared in opposition.

Analysis of these figures shows that of the 29 persons classed as proponents of these bills 23 were sheep raisers or their representatives, two were the authors of the bills, one a cotton growers' representative who said he saw no great good in the bills but thought they would do no harm and who was mainly interested in the general principle of branding, two were machine manufacturers who testified that machines could be made to do the necessary marking and one a representative of the American Fair Trade League who said he was "not at all familiar with the French Bill." There you have a public clamoring for virgin wool. Haven't you? Or have you?

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#### UNDERLYING CONDITIONS IN THE TEXTILE INDUSTRIES.

MANY of the men engaged in the live stock industry and particularly in wool growing are greatly depressed by the marked drop in wool values, and they see little else but destruction ahead unless certain things they deem essential for their salvation are done and certain policies adopted. In their gloom, some wool growers have cast about for the causes of their distress and have hit upon the use of unidentified reworked wool as solely responsible for it. They forget that the wool merchants, whom not a few would like to put out of business, and the wool manufacturers like themselves, have been heavy losers by the sudden and serious reduction of wool values. They forget also that it is always darkest before the dawn, and that indications point to better times in the not far distant future.

Conditions in this country are fundamentally sound and point to a resumption of approximately normal conditions within a few months. It must be remembered that the man who has "gone short on the United States" in the past has always gone "broke." Amid the gloom encircling us it is cheering, indeed, to meet an optimist. Among such is Mr. Edward Farnham Greene, Treasurer of the Pacific Mills and President of Lockwood, Greene & Co. Writing in the January issue of *Builders*, issued by the latter, Mr. Greene bids those associated with him in these great undertakings to be of good cheer, among other things saying:

We are passing through some very trying times. The situation in Europe is disturbed and uncertain and the financial, commercial and industrial conditions at home have been seriously disarranged by the necessary process of deflation which was bound to take place

sooner or later. The reaction has come sooner than most of us expected, but probably the very severity of the readjustment will mean an earlier return to normal conditions. Personally, I am an optimist and believe that the fundamental conditions in this country are sound. With probably very few exceptions there has been no over-production, which usually is the cause of hard times. Once confidence is restored—and already there are indications that this is beginning to take place—business will pick up probably more rapidly than many of us feel is possible from the conditions of the moment. We all have a problem in Europe whether we are interested directly or indirectly in foreign business and we are confident that America will in some way do her part in an economic manner rather than going too far along political lines.

For those engaged in the textile industry there is a good deal of hopefulness in the situation. There has been no over-production in the industry; comparatively few new mills have been built; and the reduction in hours throughout the world has created, under normal conditions, a scarcity of production as compared with consumption. Therefore, it is reasonable to assume that with low prices for wool and cotton, and a reasonable adjustment in wages, confidence on the part of the buying public will soon be re-established.

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### A STUDY OF CLOTHING PURCHASING HABITS.

MUCH attention is being paid these days by the various organizations of women to the economical purchasing of materials for use in the home and in the office. To reach useful conclusions experiments have been made with silks, petticoats having been made from certain kinds of standard silks for wearing tests, and other tests have been undertaken for other fabrics. As a feature of this investigation Miss Ethel L. Phelps, of the Division of Home Economics in the University of Minnesota, read a paper at the Thirteenth Annual Meeting of the Division of Home Economics Association in which she discussed the results of a study of Clothing Purchasing Habits by the people, which the author stated was not the report of work done by one person, but it summarized the work done in Minnesota only, which is but a small part of the whole survey of the Committee on Standardization, of which Miriam Birdseye is chairman.

Miss Phelps wrote:

The information collected concerning service dresses may well be used as a specific illustration of an intensive study of purchasing habits, the type of garment being one quite generally used. In this study, the term "service dress" is used by the committee to indicate the type of dress worn by the business woman daily, and on the street by the homemaker, excluding garments for formal social wear,

or for house work. It was found necessary in some cases to include the wool or silk suit under this head, as many women, including homemakers, use the suit skirt and a blouse in place of such a dress.

Material for this particular study was gathered by several groups, under the direction of Marion Weller, chairman of the advisory committee on service dresses, which included the clothing and textiles sections of both the college and state home economics associations in Minnesota. Approximately 1500 to 2000 questionnaires were sent out, many by the chairman of the committee, and many others by the secretary of the local Division of Women's Activities of the Department of Justice. As a result, there are represented in this report teachers, university students, clerks, and homemakers from small towns as well as cities. The student association canvassed the students, staff, and clerks of the college. A large number of Minneapolis teachers were reached through a group meeting of all home economics teachers in the public schools of that city. The data from homemakers were chiefly obtained through the co-operation of the women's clubs, questionnaires having been taken to the club meeting, explained, filled out, and collected. The results obtained in this way were rather more accurate and satisfactory than would have been the case had the blanks been distributed promiscuously, and a much greater number were returned. All of the teachers, students, and clerks have been grouped together, and the club women divided into two groups—those living in the three larger cities of Minnesota (Minneapolis, St. Paul, and Duluth), and those living in some 65 smaller towns scattered throughout the state.

The total number of questionnaires returned was 876, of which approximately one-sixth were from club women in the three cities, one-third from club women in smaller towns, and one-half from teachers, students, and clerks. About one-tenth were either blank or incorrectly filled out, so that the actual number of reports used was 789, a number sufficiently large to be considered a fair sample. It is to be regretted, however, that this sample omits certain important groups having markedly different purchasing habits, namely, those living on restricted incomes, and the wealthy. It might well be said that the results of this study are true only for persons with medium incomes.

The questionnaires asked people to state the materials purchased in the last two years for wool and silk service dresses, indicating those purchased by the yard and those bought ready made. It was found necessary to change this description to materials now in use, for the reason that many women stated that they had bought nothing in the last two years. This information made it possible to study not only the materials used, but also, with sufficient accuracy the extent to which they were used. When reports began to come in, it was at once evident that many persons do not know by name the fabrics they wear day by day, as was indicated by the use of the terms wool or silk in place of the fabric name.

The following observations were made:



First. Wool is used more widely than silk for service dresses in Minnesota, 91 per cent reporting the use of wool and 61 per cent the use of silk for this purpose, some reporting the use of both wool and silk, thus clearly showing the predominating importance of wool for such garments in a northern climate.

Second. The number of kinds of fabrics used for service dresses, combining those purchased by the yard and those purchased ready made, is large and variable; 34 for wool and 30 for silk, the number of materials used by the yard being greater than the number bought ready made. The professional group use the largest number and the city club women use the fewest. This may possibly be explained on the basis of the apparent correlation between the number of persons reporting in each group, and the number of kinds of materials used by each group, the teachers being the largest and the city club women the smallest group.

Third. All fabrics are not equally popular. A very few lead with an astonishing majority; perhaps one-third to one-half are used with sufficient frequency to be significant, and the rest are used only occasionally. To illustrate this point, we need only to note that 55 per cent of all wool dresses reported are made of serge, and approximately 50 per cent of silk dresses are made of taffeta or satin, taffeta being used slightly more than satin. Furthermore, two other wool fabrics, tricotine and jersey, are used for 21 per cent of the wool dresses in addition to the 55 per cent made of serge, making a total of 76 per cent of the wool dresses made from only three fabrics. Four others, poplin, broadcloth, gabardine, and velour, have a moderate amount of use, while the remaining 27 kinds of materials are used for only 6 per cent of all the wool dresses. The same situation exists in regard to choice of silk fabrics. Only 10 per cent of the dresses are made of 21 of the 30 kinds of silk listed, while 7 others hold an intermediate position, in addition to satin and taffeta, which were used for 50 per cent. In other words, the purchasing habits of these people lead them to use only about six different materials for about nine-tenths of their wool or silk service dresses. This general statement holds true approximately in this study, for each group, as well as for the whole.

Fourth. Equally accurate information is not at present available concerning purchasing habits from the point of view of either wholesale or retail sales. An attempt was made to approximate this information by interviews with department managers and buyers in retail stores. One wholesale establishment was visited. All agreed on the preëminent position of serge, as a material purchased by people living on moderate incomes, for service dresses, but beyond that there was no agreement, short time fluctuations in sales somewhat clouding their informal verbal reports. Were it possible to make a similar study of sales records in one or two representative stores, an interesting and valuable check for this study would be provided.

Fifth. The relation of style to the choice of material for service dresses could not be ascertained. This also would best be determined



by a study of past sales records, combined with a study of style variation. The relation of the present vogue of serge to the widespread use of that material was noted by the merchants as a difficult question to answer.

Sixth. The use of trade-marked fabrics for service dresses is very limited, only two such being observed out of about 1150 instances of wool used, and 30 from over 750 instances of silk. There are many more trade-marked silks available than similarly marked wool fabrics which probably accounts for the difference between wool and silk.

A number of points may also be noted which have a bearing upon the teaching of textiles and clothing. The need for more widespread knowledge of standard fabrics is very clearly pointed out. It is of basic importance that the consumer should buy knowingly, if she is to buy wisely and economically. Such an ideal could be realized with greater completeness, were there more standardization, both of fabrics and of names of materials, than is to be found at present. Certain standard grades of undermuslins—approximately equivalent in specification, name, and price throughout the country before the war—could be cited as illustrations of these points. Competition has fostered the production of many novelty materials of unknown standard, and has also given, in some cases, more than one name to materials which are identical, except for the fact that they are the product of competing manufacturers. An illustration of this confusing situation is to be observed in the loose and varied use of the terms,—gabardine, tricotine, and Poiret twill, as well as nain-sook and batiste in undermuslins.

The work with service dresses included one part which, while it is not strictly a study of consumption habits, is intimately related to them and of great importance, namely, the listing of desirable characteristics for some of these widely used materials, which was called for under division II of the general plan for the survey. A detailed discussion of this matter can not be given at this time, other than to mention its stimulating effects in class, but it should be noted that the demands made by the consumer as to characteristics and wearing qualities of fabrics must be reasonable if they are to do good, and not harm the cause. It surely is not reasonable to ask that jersey shall not stretch, when the very nature of the knitted fabric makes that one of its most marked characteristics. Likewise, it is a waste of time to ask for serge or wool poplin or any other worsted fabric, made of combed, tightly twisted, closely woven yarns, that will not "shine." The "shine" is the inevitable result of the combination of these greatly to be desired qualities plus the wear which they make possible.

In conclusion, more should be known concerning the purchasing habits of different groups of people as regards clothing, and concerning the basic reasons or causes underlying a variation of these habits among such groups. This study has given some information as to what people buy, none as to why they buy, or what they ought

to buy—for this more is needed. Information from groups having lower incomes is desirable, but some method other than the general questionnaire must be devised in order to obtain such data. There is a practical necessity for knowing the purchasing habits of different groups, because of the many types represented in textiles and clothing classes. For a similar reason definite information might be desirable concerning groups living in different geographical regions, for example, Minnesota, California, Florida.

The entire survey of which this study is a part indicates that there is still a place for emphasis on fabric study in textiles and clothing class work, especially on standard fabrics, and the relation between their properties and use. The whole-hearted response and widespread interest in this piece of work should prove to be sufficient encouragement for further investigation along similar lines.

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### WAGE REDUCTIONS.

At the Arlington Mills and Pacific Mills in Lawrence notices were posted on or about December 13, stating that beginning with December 20 there would be a readjustment of wages on the basis of a general reduction of  $22\frac{1}{2}$  per cent of the wages then in effect. Notices posted in the mills of the American Woolen Company on January 10 indicated that a similar reduction would be effective in the Company's mills as of January 17, 1921. These reductions were made because it was felt necessary to reduce the manufacturing cost of wool fabrics before the manufacture of goods for the heavy weight season begins. The reduction thus indicated, it should be remembered, is a reduction from a wage level which represented an increase of approximately 186 per cent over the wages in effect at the end of 1915. It is designed to put wages back to where they were before the advance of December 1, 1919, and it is intended to offset the advance of 15 per cent which went into effect on May 31, 1920, but which never was much noticed in the pay envelope except in very rare instances because of the general curtailment of production which followed almost immediately after the advance went into effect. It also covers the  $12\frac{1}{2}$  per cent advance granted quite generally by the mills on December 1, 1919. Figuring on the basis of the new increased wage, the  $22\frac{1}{2}$  per cent reduction is equivalent to these two advances combined.

## Statistics for Fourth Quarter, 1920.

### ACTIVE AND IDLE MACHINERY, OCTOBER, NOVEMBER, AND DECEMBER, 1920.

AS REPORTED BY THE BUREAU OF THE CENSUS,  
UNITED STATES DEPARTMENT OF COMMERCE.

THE report prepared by the Bureau of Census of the idle and active machinery in the wool manufacture for the fourth quarter of 1920 ended December 31 is herewith presented. Those reports were begun by the National Association of Wool Manufacturers in December, 1913, and since that date they form a continuous record of the state of the industry. In November, 1918, the Bureau of Markets asked to take over the work and later it was turned over to the Census.

The report of December 1 is the worst of the year 1920. It shows over 51 per cent of the broad looms idle, nearly 45 per cent of the narrow looms unproductive, more than 40 per cent of the carpet and rug looms, more than 41 per cent of the combs, more than 51 per cent of the woolen, and nearly 43 per cent of the worsted, spinning spindles silent.

The state of the industry month by month is clearly shown by the figures. In January most of the machinery of all sorts was in motion, the percentage of the idle being comparatively small, varying from 30.2 per cent in the carpet and rug machinery to 7.2 per cent of the worsted combs. This condition continued up to the report of April 1. The report of May 1 showed less than 1 per cent increase in the idle broad looms, while a few more narrow looms were in motion than on January 1. The sets of idle cards had increased nearly 2 per cent, and woolen spindles by more than 2 per cent. On the other hand, a few more combs and 3.2 per cent more worsted spinning spindles were running. From May, when the indications of the approaching slump were more manifest, conditions grew steadily worse in all branches of the industry except in September, when there was a pause—until the last month of the year, which was the worst of the twelve. At that time more than half the broad looms, sets of

cards, and the woolen spinning spindles were idle; the percentage of narrow looms rising from 18.5 per cent in January to 44.8 in December; the carpet and rug looms increasing from 30.2 per cent to 40.1; cards jumping from 8.8 to 50.3 per cent; combs from 7.2 per cent to 41.4 per cent; woolen spinning spindles from 9.1 per cent to 51.7 per cent, and worsted spinning spindles from 10.2 per cent to 42.7 per cent.

Another feature was much in evidence. While the broad looms running on single shift dropped from 49,036 in January to 29,528 in December, those on double shift also decreased from 3,380 to 649 in the same period. Narrow looms on single shift slumped from 14,594 to 9,957 and those on double shift dropped from 141 to the point of disappearance. Carpet and rug looms on single shift fell from 5,825 in January to 5,063 in December, while those on double shift dropped from 948 to 176. The combs on single shift fell from 1,611 to 1,190 and on double shift from 629 to 218. Woolen spinning spindles on single time decreased from 1,740,613 to 1,050,640, and those on double time from 285,577 to 52,963. Worsted spindles on single time decreased from 1,848,353 to 1,297,701, while those on double time dropped from 238,974 to 35,500. It is a record which has not been approached for some years and indicates the very trying times through which the industry has been passing during the past eight months.

The reports by months follow:

### October 1, 1920.

#### *Summary of Reports of 909 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	31,412	11,998	5,609	4,027	1,749	1,283,204	1,722,396
Idle . . . . .	30,156	6,445	2,977	2,502	625	975,578	606,040
Total . . . .	61,568	18,443	8,586	6,529	2,374	2,258,782	2,328,436

November 1, 1920.

*Summary of Reports of 928 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	32,921	11,362	5,266	4,011	1,616	1,298,023	1,493,826
Idle . . . . .	29,100	6,882	3,292	2,621	788	969,766	799,038
Total . . . .	62,021	18,244	8,558	6,632	2,404	2,267,789	2,292,864

December 1, 1920.

*Summary of Reports of 926 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	30,177	9,957	5,121	3,315	1,408	1,103,603	1,333,201
Idle . . . . .	31,626	8,078	3,435	3,353	997	1,180,194	994,869
Total . . . .	61,803	18,035	8,556	6,668	2,405	2,283,797	2,328,070

Percentage of Idle Machinery to Total Reported.

Dec. 1, 1920 . .	51.2	44.8	40.1	50.3	41.4	51.7	42.7
Nov. 1, 1920 . .	46.9	37.7	38.5	39.5	32.8	42.8	34.8
Oct. 1, 1920 . .	49.0	34.9	34.7	38.3	26.3	43.2	26.0
Sept. 1, 1920 . .	51.8	34.8	35.7	39.6	37.3	44.6	38.0
Aug. 2, 1920 . .	49.5	29.9	32.3	39.6	33.4	45.5	37.6
July 1, 1920 . .	42.5	32.3	32.1	38.0	35.0	42.0	32.7
June 1, 1920 . .	26.8	22.4	29.1	21.1	15.9	23.1	14.2
May 1, 1920 . .	15.2	18.2	28.5	10.6	6.7	11.5	7.0
April 1, 1920 . .	13.1	16.9	28.2	9.6	7.1	9.5	7.0
March 1, 1920 . .	14.9	19.8	27.7	9.8	7.0	10.3	11.7
Feb. 2, 1920 . .	12.2	17.6	28.6	7.6	6.9	7.1	7.9
Jan. 2, 1920 . .	14.5	18.5	30.2	8.8	7.2	9.1	10.2

# 140 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

Number of Machines in Operation Per Shift Beginning January 2, 1920.

Dec. 1, 1920 :							
Single shift,	29,528	9,957	5,063	3,139	1,190	1,050,640	1,297,701
Double shift,	649	. . . . .	58	176	218	52,963	35,500
Nov. 1, 1920 :							
Single shift,	32,268	11,362	5,209	3,780	1,319	1,229,094	1,436,516
Double shift,	653	. . . . .	57	386	297	68,929	57,310
Oct. 1, 1920 :							
Single shift,	30,833	11,998	5,544	3,641	1,423	1,186,487	1,627,244
Double shift,	579	. . . . .	65	386	326	96,717	196,152
Sept. 1, 1920 :							
Single shift,	29,150	11,859	5,340	3,519	1,148	1,146,100	1,339,550
Double shift,	456	232	147	433	346	106,249	106,530
Aug. 2, 1920 :							
Single shift,	30,549	12,326	5,448	3,474	1,177	1,131,375	1,297,656
Double shift,	447	170	68	463	398	99,293	151,683
July 1, 1920 :							
Single shift,	34,506	12,173	5,572	3,585	1,114	1,208,275	1,398,767
Double shift,	667	80	275	452	416	99,312	160,008
June 1, 1920 :							
Single shift,	43,713	13,882	5,912	4,581	1,483	1,586,143	1,791,669
Double shift,	1,192	79	178	532	491	134,051	195,488
May 1, 1920 :							
Single shift,	49,817	14,747	6,109	5,097	1,634	1,779,808	1,931,166
Double shift,	2,355	118	58	716	632	208,848	263,034
April 1, 1920 :							
Single shift,	50,261	14,832	5,965	5,071	1,520	1,781,743	1,890,939
Double shift,	2,863	184	144	810	719	243,648	298,515
March 1, 1920 :							
Single shift,	48,923	14,370	5,999	5,029	1,636	1,731,607	1,790,701
Double shift,	3,291	114	232	826	607	271,990	284,408
Feb. 2, 1920 :							
Single shift,	50,302	14,703	6,069	5,127	1,521	1,777,815	1,885,490
Double shift,	3,647	228	157	965	727	292,656	278,628
Jan. 2, 1920 :							
Single shift,	49,036	14,594	5,825	5,052	1,611	1,740,613	1,848,353
Double shift,	3,380	141	207	948	629	285,577	238,974



## WOOL STOCKS AND CONSUMPTION.

BELOW is the report of the United States Department of Agriculture showing the quantity of wool on hand in the United States as of September 30, 1920. This statement is issued quarterly by the Department, and corresponding statements for previous quarters were published in earlier numbers of the BULLETIN. These figures taken in connection with the Government monthly reports of wool consumed and of the Active and Idle Machinery Reports give a very clear idea of the condition of the industry from time to time.

WOOL STOCKS, SEPTEMBER 30, 1920, AS REPORTED BY DEALERS, MANUFACTURERS, AND THE UNITED STATES GOVERNMENT.

As Reported by Dealers and Manufacturers.	Held by		Total.	Estimated Equivalent Grease Wool.	Held by Government.	
	Dealers.	Manu- facturers.				Estimated Equivalent Grease Wool.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
<b>Grease Wool:</b>						
Domestic . . . . .	138,102,543	77,541,957	215,644,500		1,284,202	
Foreign . . . . .	69,160,975	103,759,417	172,920,392		41,218,038	
<b>Total . . . . .</b>	<b>207,263,518</b>	<b>181,301,374</b>	<b>388,564,892</b>	<b>388,564,892</b>	<b>42,502,240</b>	<b>42,502,240</b>
<b>Scoured Wool:</b>						
Domestic . . . . .	10,645,151	8,537,396	19,182,547		894,798	
Foreign . . . . .	17,275,921	9,167,695	26,443,616		10,134,859	
<b>Total . . . . .</b>	<b>27,921,072</b>	<b>17,705,091</b>	<b>45,626,163</b>	<b>91,258,326</b>	<b>11,029,657</b>	<b>22,269,314</b>
<b>Pulled Wool:</b>						
Domestic . . . . .	8,603,700	5,247,249	13,850,949		234,536	
Foreign . . . . .	5,892,829	2,581,759	8,474,588		4,566,656	
<b>Total . . . . .</b>	<b>14,496,529</b>	<b>7,829,008</b>	<b>22,325,537</b>	<b>29,767,382</b>	<b>4,801,192</b>	<b>6,401,589</b>
<b>Total grease, scoured, and pulled . . . . .</b>						
<b>Tops . . . . .</b>	<b>5,563,873</b>	<b>15,838,871</b>	<b>21,402,744</b>	<b>42,805,488</b>		
<b>Noils . . . . .</b>	<b>4,754,365</b>	<b>9,124,163</b>	<b>13,878,528</b>	<b>27,757,056</b>		
<b>Grease equivalent of all wool reported above, . . . . .</b>				<b>580,153,144</b>		<b>71,163,143</b>
<b>Estimated grease equiv- alent of all wool re- ported held by deal- ers, manufacturers, and the U. S. Govern- ment Sept. 30, 1920, . . . . .</b>						<b>651,316,287</b>

Schedules were sent to 985 concerns and the United States and British Governments. In addition to the reports included in the tabulation 95 concerns reported no stocks held and 27 concerns failed to reply. In addition to the above there were approximately 3,600,000 pounds belonging to the British Government and unsold.

## WOOL CONSUMED BY MONTHS.

SEPTEMBER, 1920.

Schedules sent to 553 establishments.

9 made no report;

76 reported no wool consumed;

468 reported wool used as follows:

In Grease.

In grease.....	24,743,964 pounds	=	24,743,964 pounds.
Scoured.....	4,961,139 "	=	9,922,278 "
Pulled .....	1,223,234 "	=	1,630,978 "
<hr/>			
Total .....	30,928,337 "	=	36,297,220 "

OCTOBER, 1920.

Schedules sent to 552 establishments.

72 reported no wool consumed;

In Grease.

In grease.....	28,120,183 pounds	=	28,120,183 pounds.
Scoured.....	4,318,577 "	=	8,637,154 "
Pulled .....	1,264,763 "	=	1,686,350 "
<hr/>			
Total .....	33,703,523 "	=	38,443,687 "

NOVEMBER, 1920.\*

In Grease.

In grease.....	19,391,538 pounds	=	19,391,538 pounds.
Scoured .....	3,539,558 "	=	7,079,116 "
Pulled .....	1,219,045 "	=	1,625,393 "
<hr/>			
Total .....	24,150,141 "	=	28,096,047 "

\* No statement was made of the number of manufacturers to whom reports were sent or the number reporting; but it was stated that the reports for October and November are approximately 98 per cent complete.

QUARTERLY REPORT OF BOSTON WOOL MARKET. 143

QUARTERLY REPORT OF THE BOSTON WOOL MARKET FOR  
OCTOBER, NOVEMBER, DECEMBER, 1920, AND DECEMBER, 1919.

DOMESTIC WOOLS. (F. NATHANIEL PERKINS.)

	1920.			1919.
	October.	November.	December.	December.
OHIO, PENNSYLVANIA, AND WEST VIRGINIA.				
(UNWASHED.)	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
1/2 Fine Clothing . . . . .	42	38	38	70
1/2 Blood, Staple . . . . .	42	40	35	83
1/2 " " . . . . .	40	32	30	70
1/2 " " . . . . .	38	30	28	67
1/2 Fine Delaine . . . . .	60	53	50	88
MICHIGAN, WISCONSIN, NEW YORK, ETC.				
(UNWASHED.)				
1/2 Fine Clothing . . . . .	40	36	35	70
1/2 Blood, Staple . . . . .	40	38	33	85
1/2 " " . . . . .	38	30	28	70
1/2 " " . . . . .	36	28	26	65
1/2 Fine Delaine . . . . .	55	50	45	90
KENTUCKY AND INDIANA.				
(UNWASHED.)				
1/2 Blood . . . . .	42	38	28	78
1/2 " . . . . .	40	36	26	68
1/2 Braid . . . . .	28	14	13	40
MISSOURI, IOWA, AND ILLINOIS.				
(UNWASHED.)				
1/2 Blood . . . . .	38	32	24	65
1/2 " . . . . .	36	28	23	65
1/2 Braid . . . . .	28	14	12	40
TEXAS.				
(SCOURED BASIS.)				
12 months, fine and fine medium . .	100	85	80	200
Spring, fine and fine medium . . .	85	70	63	165
Fall, fine and fine medium . . . .	65	50	45	155
CALIFORNIA.				
(SCOURED BASIS.)				
12 months, fine . . . . .	90	80	70	185
Spring, fine . . . . .	75	60	55	165
Fall, fine . . . . .	50	45	40	135
TERRITORY WOOL: Montana, Wyoming, Utah, Idaho, Oregon, etc.				
(SCOURED BASIS.)				
1/2 Staple, fine and fine medium . . .	120	95	90	200
1/2 Clothing, fine and fine medium . .	100	90	75	190
1/2 Blood . . . . .	90	80	75	180
1/2 " . . . . .	75	60	55	140
1/2 " . . . . .	55	50	40	115
NEW MEXICO.				
(SCOURED BASIS.)				
No. 1 . . . . .	95	85	75	165
No. 2 . . . . .	75	58	50	145
No. 3 . . . . .	40	30	25	110
GEORGIA AND SOUTHERN.				
Unwashed . . . . .	25	20	18	60 @ 65

The above prices must in some cases be considered nominal in the absence of sales.

DOMESTIC WOOLS.

The last quarter of the current year opened with extreme dullness prevailing throughout the trade, accompanied by declines in values in London and South America and heavy declines in the Cape markets. The condition of the mills of the country showed little improvement, a continuance of curtailed production being widespread.

The agitation to bring about Government action to place an import embargo on wools to relieve the situation in the sheep industry was a leading discussion in the trade and later the agitation to have Congress legislate to equalize the difference in exchange was followed by definite action by the House of Representatives in passing an emergency tariff bill, which, as the year closes, is still being held in abeyance awaiting action by the Senate.

The wool trade during the period under review held large quantities of domestic wool on consignment, which in comparison with normal times have moved very slowly. While there have been more inquiries for wools, where sales have been made, they have been chiefly of the choicer lots of merino wool.

The November election, while bringing promise for the future, really had very little effect on the current market values of wool. As the year closed the Government held an auction sale which made a new record in that every lot offered was sold, although the prices were on a low basis. Most of the offerings being of medium or low grades the principal buyers represented carpet mills.

"Optimistic talk is already current and better conditions will come as it gains circulation and convinces people that the situation is fundamentally sound."

F. NATHANIEL PERKINS.

Boston, January 4, 1921.

PULLED WOOLS. (W. A. BLANCHARD.)

	1920.			1919.
	October.	November.	December.	December.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Extra, and Fine A . . . . .	100 @ 110	90 @ 100	85 @ 100	175 @ 190
A Super . . . . .	70 @ 80	65 @ 75	60 @ 75	150 @ 165
B Super . . . . .	45 @ 50	40 @ 50	35 @ 45	120 @ 130
C Super . . . . .	30 @ 40	25 @ 35	25 @ 30	75 @ 85
Fine Combing . . . . .	80 @ 90	75 @ 80	65 @ 75	155 @ 170
Medium Combing . . . . .	55 @ 65	50 @ 60	45 @ 50	125 @ 135
Low Combing . . . . .	35 @ 45	35 @ 40	30 @ 35	75 @ 85

PULLED WOOLS.

By reason of the general curtailment of production by the mills the demand for pulled wools during the quarter was greatly limited, and market quotations cannot be given with accuracy. Week by week prices were lowered without effecting sales, and these conditions prevailed until the middle of December, when a speculative turn-over in B supers started. In this spurt manufacturers and dealers participated, and the large accumulation of this grade in pullers' hands was speedily absorbed. Following this movement came a general toning up of the market, and though actual transactions were of limited volume, confidence was restored and values became more stabilized.

W. A. BLANCHARD.

Boston, January 17, 1921.

FOREIGN WOOLS. (MAUGER & AVERY.)

Scoured Basis, 1920.

	1920.			1919.
	October.	November.	December.	December.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Australian Combing:				
Choice . . . . .	150	135	120	240
Good . . . . .	140	125	100	220
Average . . . . .	120	110	90	210
Australian Clothing:				
Choice . . . . .	150	135	120	220
Good . . . . .	130	110	90	200
Average . . . . .	100	90	75	185
Sydney and Queensland:				
Good Clothing . . . . .	130	110	90	200
Good Combing . . . . .	140	125	100	230
Australian Crossbred:				
Choice . . . . .	45 @ 80	40 @ 70	35 @ 65	65 @ 140
Average . . . . .	35 @ 65	30 @ 60	30 @ 55	60 @ 130
Australian Lambs:				
Choice . . . . .	130	120	100	170
Good . . . . .	115	100	85	165
Good Defective . . . . .	85	75	60	150
Cape of Good Hope:				
Choice . . . . .	125	115	110	230
Average . . . . .	95	90	85	175
Montevideo:				
Choice . . . . .	115	100	85	200
Average . . . . .	100	85	70	170
Crossbred, Choice . . . . .	75	60	50	120
English Wools:				
Sussex Fleece . . . . .	115	110	105	130
Shropshire Hogs . . . . .	105	100	90	110
Yorkshire Hogs . . . . .	50	45	40	66
Irish Selected Fleece . . . . .	50	45	40	68
Carpet Wools:				
Scotch Highland, White . . . . .				
East India, 1st White Joria . . . . .	43	40	35	95
East India, White Kandahar . . . . .	35	33	32	60
Donskoi, Washed, White . . . . .				
Aleppo, White . . . . .	32 @ 35	32 @ 35	35 @ 37	62
China Ball, White . . . . .	50 @ 60	50 @ 55	50 @ 55	80 @ 85
" " No. 1, Open . . . . .	35 @ 38	35 @ 38	35 @ 38	53
" " No. 2, Open . . . . .	25	20 @ 25	20 @ 25	45

FOREIGN WOOLS.

During the past quarter, in the absence of much demand, wools have steadily declined in value, especially the lower qualities, of which the Government held large quantities, which have been sold by degrees at auction.

The mills have been either wholly or partially shut down. Consequently, until lately, very few of them have been in the market, but during the past few weeks, quite a volume of South American and fleeces of medium grades have been disposed of.

In our quotations, English wools are valued at a higher price than similar grades of domestic, owing to the demand on the other side and prices ruling there, which have prevented their importation; so that the quotations on English wools are nominal, and not based on actual sales here.

The possibility of the passage of an embargo on wools by the present Congress has stimulated some holders to ask higher values, but there is no genuine stability in these advanced figures.

MAUGER & AVERY.

Boston, January 14, 1921.





**BULLETIN**  
OF THE  
**National Association of Wool Manufacturers**  
A QUARTERLY MAGAZINE  
DEVOTED TO THE INTERESTS OF THE NATIONAL WOOL INDUSTRY.

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VOL. LI.]

BOSTON, APRIL, 1921.

[No. II.

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THE FIFTY-SIXTH ANNUAL MEETING OF THE NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

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BUSINESS TRANSACTED.—REPORTS OF OFFICERS AND COMMITTEES.—RESOLUTIONS ADOPTED AND OFFICERS ELECTED.

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THE fifty-sixth annual meeting of the National Association of Wool Manufacturers was held on the afternoon of Thursday, February 10, 1921, following an informal luncheon at Young's Hotel. The meeting was called to order by President Frederic S. Clark, who presided.

At the request of President Clark the Secretary read the call for the meeting which was sent to the members under date of January 24, in accordance with the By-laws, summoning the meeting to be held at the Hotel Willard, Washington, D. C., on February 2, 1921, at 9 A.M. The meeting was called at that time and place, because several of the officers and members of the Association were in Washington attending the hearings on the schedule of the customs tariff covering wool and manufactures thereof then being held by the Committee on Ways and Means of the House of Representatives.

As there was no quorum at that meeting, President Clark, in accordance with the By-laws, declared it adjourned until 2 o'clock P.M. on February 10, 1921, at Young's Hotel, Boston. On motion the reading of the minutes of the last meeting was omitted, the same having been printed in the Bulletin, and no corrections having been presented.

## REPORT OF PRESIDENT FREDERIC S. CLARK

The past year has been one of unusual activity in our Association, the various phases of which will be reported in detail by the Secretary and various committees.

At the time of our last annual meeting we were at the peak of business prosperity, wool consumption for the month of January, 1920, being 72,721,000 pounds, an amount, exceeded but once during the war, namely, in May, 1918, when it was 74,672,000 pounds. While we were well aware that this condition could not continue indefinitely and that a period of deflation must sooner or later occur, the belief that the void created by the long period of slight production for civilian purposes would require an enormous supply, led us to anticipate at least another year of great demand. Costs for wool, wages, and other items were the highest ever and goods for Fall had been opened at correspondingly high prices. The prices for the Spring of 1920 had also been necessarily high and met with what has been called "a Consumers' Strike."

A gradual deflation at this time would have been a helpful movement and would have saved the extreme disaster which followed, but a practical *cessation* of business was precipitated by the action of the Government in bringing unwarranted profiteering charges against our industry and in urging the public not to buy.

Orders which had been given manufacturers for Fall were cancelled right and left, deliveries of both Spring and Fall goods were rejected or returned, and a period of depression ensued without a parallel in the memory of our oldest members. Consumption of wool declined to 28,690,000 pounds in the month of November, only a trifle more than one-third that of January.

The extreme disregard of contract obligations has awakened our industry, as never before, to the importance of remedial action, and our friends in the American Association of Woolen and Worsted Manufacturers and in the new organization, the Council of Commercial Contracts, are sure of our hearty co-operation.

It cannot truthfully be said that wages of employes have not followed the advancing costs of living in recent years. As a matter of fact, they have materially exceeded those costs. Beginning with January 1, 1916, there have been 10 voluntary advances in wages. The last on June 1, 1920, was hardly justified, because the depression was then beginning. It probably would not have been made, had it not been decided upon when conditions seemed to justify it and announced a considerable time prior to its effective date.

These advances brought textile wage earnings to nearly 3 times those prevailing in 1915, notwithstanding a reduction in hours from 54 to 48 per week; whereas costs of living had only slightly more than doubled. The recent reduction in wages still leaves the rates about 120 per cent higher as against an advance in the cost of living on January 1, 1921, of about 81 per cent. We do not desire, or expect, that wages will ever recede to those prevailing before the war.

At the present time there is a rift in the clouds and the demand for Spring fabrics that can be delivered before April 1 is a corroboration of our belief that there is not an over supply of goods in the market.

Our future is largely dependent on quick tariff action and on the adoption of some method for counteracting the effect of the very low rates of foreign exchange. These matters have received for some time, and are now receiving, the earnest attention of your officers.

In retiring from the office of President I wish to acknowledge the very great assistance and co-operation which I have received from our Executive Committee and our office organization.

Respectfully submitted,

FREDERIC S. CLARK, *President.*

The Treasurer, Paul T. Cherington, read his report and the report of the Auditor, which were accepted and ordered to be filed.

The Secretary, Paul T. Cherington, read his report covering the activities of the Association during the year ended January 31, 1921. It was as follows:

#### REPORT OF THE SECRETARY

*To the Members of the National Association of Wool Manufacturers:*

A year ago the American wool manufacturing industry was enjoying a period of unusual prosperity; mills were running on full time; orders were booked months ahead, and the prospects for a good year were excellent. These promises were not fulfilled.

For the first four months of the year no serious disturbing influences were noticeable. About May 1 the operatives asked for an increase in wages, and most of the mills advanced wages 15 per cent, to take effect on the last Monday in the month. The turn in the condition of the fabric market came

sometime between the receipt of this request for an increase, which found most manufacturers ready to grant it, and the date when the increase went into effect, when the flood of cancellations had already begun and many manufacturers had serious misgivings about the effects of the increase in wages. Several mills by that time were going on a three or four day schedule; cancellations had become general, and it was plain to everyone that goods, if salable at all, could not carry the costs which the new wage rates made necessary.

Liquidation, of course, was taking place in many lines of industry. With the break in the prices for agricultural staples, it is probable that the wool manufacturing industry would have shared in the effects of the general price decline. The fact that an indictment was brought by the Federal Department of Justice, under the Lever Act, against one large corporation on May 26 (preceded two weeks earlier by a charge of profiteering against the same concern on the floor of the Senate by a senator from a large wool manufacturing state) certainly did not serve to check the process of cancelling orders for fabrics which faulty trade customs made easy. The Government's case collapsed within a month, but this did not offset the effects produced by the flourish with which the suit was instituted. The decline in the wool manufacturing conditions was thus converted from what might have been an orderly descent into a shocking fall.

The subsequent collapse of the light weight season and the shrinkage of inventory values are matters too recent and too unpleasant to be dwelt on at length. As a rule manufacturers resolutely have written off their losses and cleared away the wreckage for the heavy weight season of 1921. The industry as a whole seems to take a hopeful view of the present situation. There certainly is much to make the immediate prospect encouraging.

#### SOME OF THE YEAR'S WORK

It is on this background of brilliant hopes subsequently shattered that the work of the Association for the year has been done.

Most important of all in many respects is the work of the Tariff Committees. These committees, a list of which is appended to this report, were appointed at a meeting of the Executive Committee on January 4, 1921. The General Committee, under the chairmanship of Colonel John P. Wood and in co-operation with committees appointed by the American Association of Woolen and Worsted Manufacturers and the National Association of Woolen and Worsted Spinners, imme-

diately began work. There were frequent meetings of the various sub-committees, and there were three general meetings of the entire committee held during the month of January, 1921. Colonel Wood will make a more complete report of the work of the committee, but at this point perhaps the most important item to record is the fact that at the hearings before the Committee on Ways and Means of the House of Representatives, at which the wool schedule was considered on January 31 and February 1 and 2, 1921, the committee presented, through Colonel Wood, a brief covering the tariff views of this Association and of the other organizations co-operating with it. The brief thus presented has been most favorably commented on by all who have seen it as exhibiting complete insight into the intricacies of the industry and a statesmanlike recognition of the larger problems presented by the present industrial and financial situation.

In the latter part of October, 1920, a good deal of interest was aroused in the effects of depreciated values of foreign currencies upon such tariff duties as are levied by the tariff law of 1913. At the request of a number of members of the Association a statement was secured from an attorney familiar with customs affairs, showing the method by which values are calculated for the purpose of levying import duties. This report was sent to the members of the Executive Committee on November 3, and at the meeting of the committee held on November 10, the matter was discussed at length. A committee of three was appointed to give the question of foreign exchange with relation to the tariff more detailed examination. This committee consisted of Mr. Franklin W. Hobbs, Chairman, and Messrs. Jacob F. Brown and Paul T. Cherington. A project for equalizing differences in exchange drawn up by Mr. Brown was further considered by the committee, and was brought to the attention of Senator Henry Cabot Lodge of Massachusetts and others.

After deliberation, the plan of equalization as suggested by Mr. Brown was drawn up in tentative form, and was discussed at an informal conference attended by several members of the Executive Committee on December 5 and by the Executive Committee as a whole at its meeting on December 6, 1920. As a result of this discussion the committee having the matter in charge was requested to go to Washington and lay the matter before such members of Congress or others as might seem to be interested.

An impromptu hearing was called by Chairman Joseph W. Fordney of the Committee on Ways and Means of the House of Representatives, and the members of your committee appeared at those hearings and discussed at length the pro-



posed plan. After the hearings, at the request of Chairman Fordney, a bill was drawn setting forth the ideas contained in the plan for equalizing exchange rates. This bill was drawn by an expert in the Treasury Department, and after much rewriting was finally submitted in such form that it was deemed suitable to give it to the chairman of the Committee on Ways and Means.

#### COMPULSORY BRANDING PROPAGANDA

At the last annual meeting the "Truth in Fabric" agitation was assuming definite form, and the Association's committee reported that it was at work on a brief covering the subject. The hearings before the Committee on Interstate and Foreign Commerce of the House of Representatives were called for March 19, 1920, and were finally closed on March 31, 1920. The brief which had been prepared was submitted in connection with these hearings, and President Clark made a supplementary statement concerning the samples which were submitted and brought out numerous other important points in connection with the subject. The members of the committee, consisting of Mr. Charles H. Wilson, Chairman, and Messrs. Samuel R. Haines, and Carl Vetter, together with President Frederic S. Clark and Mr. Paul T. Cherington, Secretary of the Association, were in attendance at the hearings.

Since the hearings were completed the National Sheep and Wool Bureau of America, which through its President, Alexander Walker, Vice-President of the Strong-Hewat Company, is the most active sponsor for the French-Capper bill, has issued a substantial amount of propaganda material and has been very active in securing the passage of resolutions by all sorts of commercial and industrial bodies throughout the West. The French-Capper bill, bearing the title of "Truth in Fabrics," has been very plausibly exploited, and as an advertising venture the drafting of the bill and the exploiting of it may be said to have been a success from the standpoint of those responsible for it.

The possibility of legislation of this character seems remote. If any bill is to be passed, the indications are that it would most likely be the Rogers bill which coincides with the views which this Association has consistently stood for in connection with the sale of textiles. In view of the active propaganda which has been carried on, nearly all of which is designed to bring general popular pressure on members of Congress, it is recommended that this subject be carefully watched during the ensuing year.



REPRESENTED AT TAX CONFERENCES OF THE NATIONAL  
INDUSTRIAL CONFERENCE BOARD

The Association has taken part in all three of the National Industrial Tax Conferences held under the direction of the National Industrial Conference Board. Mr. A. L. Green attended the first conference held in Chicago, April 15 and 16, 1920. Messrs. A. L. Green and Paul T. Cherington attended the second conference held in New York on October 22 and 23, 1920, and the third conference held in New York on January 21 and 22, 1921. The Association also made a subscription for the conduct of the work of the Tax Committee of the National Industrial Conference Board. The three sessions of the conference were devoted to discussion of the general subject of federal taxation, and the second and third conferences were wholly occupied in consideration of reports submitted by the National Industrial Conference Board's Tax Committee. The outstanding feature of the discussion was the disagreement concerning the wisdom of recommending a general sales turnover tax. There seemed to be general agreement that the excess profits tax should be abolished and that there should be some modification of certain of the income tax rates. The committee as a whole, however, reported against the adoption of any sort of general sales turnover tax as a means for making up the revenue thus cut off. This feature of the report aroused very strong opposition, and there was a considerable body in the third conference which believed that a small turnover tax of, say, one per cent might well be recommended as a means for making up the deficit in the tax plan which would be incurred by the abolition of the excess profits tax. The committee's recommendation, on the other hand, was that the deficit be made up by certain special direct taxes.

In connection with the third conference it became necessary for your delegates to decide whether they felt authorized to commit the Association to the principle of the sales tax. The committee did not feel authorized to do this and made a statement to that effect on the floor of the conference. It has been suggested that it might be advisable to submit to the entire Association for individual vote the question of whether the sales tax seems advisable.

The Association through the year has continued its membership in the National Industrial Conference Board, being represented on the Board by President Frederic S. Clark and Mr. George E. Kunhardt.

In February of 1920, some of the members of the Association called attention to the fact that measures ought to be

taken to secure the necessary imports of olive oil from Spain for use in connection with wool combing. The matter was made the subject of detailed correspondence with authorities in Washington, and it is expected that as a result of these negotiations a sufficient supply of olive oil for this purpose may be made available.

#### PERMANENT COMMITTEE ON RESEARCH WORK APPOINTED

At the meeting of the Executive Committee on May 18, 1920, the committee, which was appointed in December, 1919, to confer with Director Stratton of the Bureau of Standards concerning co-operation in certain lines of scientific investigation, was appointed a General Committee on Research. This committee includes President Frederic S. Clark and Messrs. Henry A. Francis, George E. Kunhardt, William D. Livermore, and Paul T. Cherington. Correspondence was continued with Director Stratton of the Bureau of Standards and with Mr. Harrison E. Howe, Research Director of the National Research Council. Dr. Stratton and one of his assistants working on textile subjects made a visit to some of the mills in the Lawrence and Lowell districts in July, and reported that progress was being made on some of the problems under investigation. At the meeting of the Executive Committee on September 14, it was voted to look into the various lines of research work being done in Washington in connection with wool and cotton. As a result of this vote the Secretary went to Washington and inquired into this subject, and a detailed report concerning it has been made. On November 10 the Research Committee met and considered the whole subject of scientific research, as a result of which it was decided that the question of co-operation in research ought to be taken up with some of the textile schools. Since that time correspondence has been had with the Lowell Textile School but on account of the press of other matters no conclusive arrangement has been made.

As a result of the work of the Committee on the Wage Schedule, a new set of forms has been prepared and the policy has been adopted of securing returns from all members of the Association, from which averages of wages in effect at intervals in different sections may be made up.

During the year the Advisory Committee has held four meetings as follows: April 29, November 10, November 29, and December 17, 1920. The Executive Committee has met six times: March 4, May 18, September 14, October 6, December 6, 1920, and January 4, 1921.

The Quarterly Bulletin and the Monthly Import Statement have been issued as usual, and in January of 1921 pub-

lication was begun of a monthly statement of statistics representing domestic conditions in the industry.

In addition to these regular printed publications, there have been sent 37 general bulletins to all members of the Association, 43 bulletins to the members of the Executive Committee, and 25 bulletins to special lists of members interested in the specific subject covered.

Respectfully submitted,

PAUL T. CHERINGTON, *Secretary*.

The following is the Tariff Committee of the National Association of Wool Manufacturers:

JOHN P. WOOD, *Chairman of the General Committee*.

FREDERIC S. CLARK, *Member-at-large of the General Committee*.

*Sub-Committee on Tops and Yarns:* *Sub-Committee on Dress Goods:*

FRANKLIN W. HOBBS, *Chairman*.  
WALTER ERREN.  
JACOB F. BROWN.  
JOSEPH R. GRUNDY.  
CHANNING W. SOUTHER.

EDWIN FARNHAM GREENE,  
*Chairman*.  
(H. G. Simonds).  
C. BAHNSEN.  
WM. DENBY.  
GRANVILLE E. FOSS.  
A. L. GREEN.  
JAMES R. MACCOLL.  
(W. B. MacColl).  
ARTHUR E. MASON.

*Sub-Committee on Cloths:*

C. BROOKS STEVENS, *Chairman*.  
JULIUS FORSTMANN.  
HENRY FRANCIS.  
GEORGE C. HETZEL.  
GEORGE H. HODGSON.  
WILLIAM MAXWELL.  
NATHANIEL STEVENS.

*Sub-Committee on Felts:*

WILLIAM H. SWEATT, *Chairman*.  
(G. A. Bramwell).  
EDMUND N. HUYCK.  
JOSEPH STROOCK.

*Sub-Committee on Plushes:*

GEORGE G. EMERY, *Chairman*.  
RANDALL B. HOUGHTON.

*Sub-Committee on Nails, Waste, Shoddy and Rags:*

ALBERT C. BOWMAN, *Chairman*.  
BRADLEY M. ROCKWOOD.

It was voted that the report be accepted, published in the Bulletin, and placed on file.

Mr. John P. Wood, Chairman of the Tariff Committee of the Association, made an informal statement in which he outlined the present tariff situation. He said that there were three separate phases of the tariff discussed at this time which were of great importance. First is the so-called Fordney Emergency Tariff bill placing duties on certain agricultural commodities which was passed by the House without debate late in December and which is at present under discus-

sion by the Senate. Its subsequent vote was more or less doubtful in view of the fact that after it had been through the Conference Committee it might not pass both Houses of Congress in revised form, and that if passed by them it might not receive the signature of the President. The second feature of the present situation Mr. Wood referred to as the need for some general emergency tariff legislation to be passed immediately after the new Congress was assembled. The third was a general revision of the tariff on a protective basis. Mr. Wood discussed in detail each of these three features of the present situation.

The Treasurer, Mr. Paul T. Cherington, read his report which showed a balance on hand and all obligations paid. The report was accepted and ordered to be placed on file.

Concerning the co-operation of the Association with the activities of the National Industrial Conference Board during the year, the following report was submitted by the Secretary on behalf of George E. Kunhardt, who had prepared the report at the request of President Clark.

#### REPORT OF DELEGATES TO INDUSTRIAL CONFERENCE BOARD

As one of the members of the National Industrial Conference Board appointed to represent our Association, I am making a brief statement as to the activities of the Board during the year 1920, and our participation in the same.

The Conference Board at the present time comprises delegated representatives of twenty-six national and four state industrial associations.

Our Association has made contributions to the extent of \$5,000 to the Board in 1920, and a number of our members have subscribed independently toward its activities. The number of individual employers who contribute to the Board is constantly increasing as the importance of the work is becoming more widely recognized.

The current activities of the Board are reviewed at monthly meetings of its members. The information that has been assembled, and the reports that have been prepared by the Board's Research Staff, are placed before the Board for discussion and to secure an expression of their collective judgment. Prominent industrialists and economists, who are not members of the Board or its Staff, frequently participate in these discussions, so that the reports issued by the Board re-

flect the joint conclusions of successful business men and research students based on ascertained facts. New lines of study and investigation are planned at Board meetings, and broad policies of action with regard to matters having an important relation to the welfare of industry are debated.

Because of their accuracy and reliability, the results of the Board's investigations as presented in its various reports are now accepted as authoritative by legislative bodies, economists, employers, and even by labor organizations and labor publications. They are frequently quoted from and commented upon in newspapers, technical journals, and various other periodicals, even in foreign countries. Now holding the unquestioned leadership as an agency for informing the public as to the truths concerning industry, the Board wields a great influence on public opinion and legislative action regarding the welfare of industry in general. The Board is constantly consulted for advice on industrial problems of every character, and since the removal of its headquarters from Boston to New York last August, its activities have been greatly broadened in response to increased demands for investigations and information.

The heart of the Board's work is industrial economic research. In 1920 the Research Reports issued by the Board included "A Works Council Manual," "The Hours of Work Problem in Five Major Industries," "Practical Experience with Profit Sharing in Industrial Establishments," "Practical Experience with the Work Week of 48 Hours or Less," together with periodical reports on "Changes in the Cost of Living" and "Changes in Wages During and Since the War." It has issued Special Reports including "Proceedings of the National Industrial Tax Conference at Chicago, Illinois, April 16, 1920," "Should Trade Unions and Employers' Associations be Made Legally Responsible?" "The Closed Union Shop Versus The Open Shop: Their Social and Economic Value Compared," "Should the State Interfere in the Determination of Wage Rates?" "Unwarranted Conclusions Regarding the Eight-Hour and Ten-Hour Workday," "Problems of Labor and Industry in Germany," and "Proceedings of the Second National Industrial Tax Conference, New York, October 22 and 23, 1920." Continuing its policy of making a wide distribution of patriotic leaflets among employes in commemoration of special events, thereby assisting in the work of Americanization, it issued one entitled "A Lincoln Day Message" for use on February 12, 1920, another entitled "Our Independence Day" for use on July 4, 1920, and still another entitled "Constitution Day" for use on September 17, 1920. Prior to issuing any Research or Special Report it is placed



before Board members for discussion and approval. The Board has many investigations under way, the published results of which will undoubtedly prove of great value.

With the aid of able committees, composed of Board members and other competent representatives of business and science, the Board has been and is studying many collateral subjects of importance. Particular reference should be made to the work of the Enlarged Tax Committee.

The Conference Board took the lead in an effort to obtain remedial Federal tax legislation by calling a National Industrial Tax Conference at Chicago last April, following which the standing Tax Committee of the Board was enlarged to fifteen members so as to make it broadly representative of American industry. The enlarged Tax Committee, only six of whom are connected with the Conference Board, assisted by five Tax Advisors, also in no way related to the Board, made an intensive study of Federal taxation. The expenses involved have been borne largely by the special contribution of the associations affiliated with the Board. Our Association donated \$1,000 to assist in this work in the belief that it would prove of much value to all of its members.

As a result of its studies, the Enlarged Tax Committee issued a Tentative Report for discussion at a second National Industrial Tax Conference held in New York City, October 22 and 23, 1920. After additional work by the Committee following this conference, a report containing revised recommendations of the Committee was published for the purpose of discussion at a third National Industrial Tax Conference which was held in New York City, January 21 and 22, 1921. As a result of this conference, and the suggestions accepted by the Committee, another report will be issued soon embodying the Committee's final recommendations for revision of existing Federal revenue laws.

The value of the activities of the Board is particularly emphasized in times of business depression, such as we now have with us. In our endeavors to determine the right policies for action during this period of reconstruction, it is highly important that we have the truth before us as to the prevailing economic conditions. The National Industrial Conference Board provides us with the material needed. It is functioning as an educator of all interested in the improvement of business conditions and provides the facts required as a basis for a fair-minded treatment of difficult questions.

The Conference Board is making continuous studies of the cost of living, the results of which are presented in its frequent reports on this important subject. Simultaneous investigations of the changes in wages are conducted, which



enable a direct comparison of the prevailing cost of living and wages to be made. The information contained in its weekly Service Letter, issued for the special benefit of the financial subscribers, is of inestimable value inasmuch as it contains information in advance of the Board's published reports on the cost of living, and treats of the unemployment situation and many other subjects of equal interest.

We, who are vitally concerned with the success of our own industry, the welfare of which is dependent upon national prosperity, should be keenly interested in, and give our financial aid to, the constructive work being done by the National Industrial Conference Board. Its record of achievements gives promise that its future work will be of increasing importance to all engaged in industry. Personally I feel that the value of our membership in the Board cannot be overestimated. Contributions from the associations affiliated in its membership, however, do not furnish sufficient funds with which to carry on the work of the Board and expand its activities as it desires to do. It must largely depend upon the subscriptions of individual employers, which I endeavored to emphasize in my report of a year ago, and it is therefore hoped that many more will add both their moral and financial support to the Board's work, and thus enable it continually to improve and enlarge its service to American industry.

During the year 1920 the Board has held nine monthly meetings in New York City, all of which were attended by our President, Mr. Frederic S. Clark, I taking part in six. One meeting of the Board was held in Chicago, at which neither of your delegates could participate.

Respectfully submitted,

GEORGE E. KUNHARDT.

On motion of Mr. Hodgson, it was voted that President John P. Wood should be one of the delegates from the Association to the National Industrial Conference Board for the ensuing year, and that the selection of the other delegate should be left to the Executive Committee.

#### RESOLUTIONS ADOPTED

Mr. John P. Wood submitted the following resolution concerning the tariff, which was adopted by the meeting:

*Whereas*, during recent years every general revision of the Federal import tariff law has required from nine to eleven months of time between the beginning of the work and the time the new law became operative, and

*Whereas*, the existing conditions in international trade will make the process of revising the tariff more than ordinarily difficult, and

*Whereas*, a general revision of the present tariff law probably cannot be accomplished and made effective within several months,

*Therefore be it Resolved*, That the National Association of Wool Manufacturers urges upon Congress the prompt enactment of such practical temporary protective legislation as will insure the capital and labor employed in the industries of this country against being overrun by foreign competition during the time necessary for a revision of the tariff law; and

*Be it further Resolved*, That Congress be urged to take sufficient time in the enactment of a permanent tariff law to make sure that its provisions are wisely and adequately drawn.

Mr. George C. Hetzel offered the following resolution concerning the exchange situation, which was adopted:

*Whereas*, the depreciation in the value of certain foreign currencies and the abnormal conditions of international trade have resulted in serious disarrangement of the normal rates of international exchange; and

*Whereas*, there is no probability that normal rates of exchange will be restored for many months to come,

*Therefore be it Resolved*, That in considering taxation, questions of trade policy, customs tariffs, and kindred matters having to do with international trade, the Congress be urged to take such measures as will minimize the disturbance of exchange rates and will hasten the return to normal conditions of exchange with the least possible interference with the operation of American industry and commerce.

Mr. Edwin Farnham Greene introduced a resolution providing that the committee which had attended the National Industrial Tax Conference should prepare a questionnaire on the subject of the general turnover tax. This resolution was as follows:

*Resolved*, That the committee of the Association which has attended the three National Industrial Tax Conferences shall prepare a questionnaire on the subject of the general turnover tax.

*Resolved*, That the Secretary, at the discretion of the Executive Committee, shall send this questionnaire to the members of this Association for the purpose of taking a referendum vote of the members on the principle of the turnover tax and the essential features of its form, if adopted.

After some discussion, the resolution was adopted.

Mr. Henry A. Francis introduced a resolution concerning Daylight Saving, which, after some discussion, was passed in the following form:

*Resolved*, That the National Association of Wool Manufacturers favors the continuation of the practice of daylight saving during the summer months of each year.

*Resolved*, That as a means toward the accomplishment of this, it favors and will co-operate with the work of the Eastern Zone Daylight Saving Association.

*Resolved*, That the National Association of Wool Manufacturers is opposed to efforts to secure daylight saving by means of laws enacted by separate states.

At the request of President Clark, the Secretary made a brief historical statement concerning the development of legislation designed to permit manufacturers to fix by contract the price at which their products might be resold. There followed some informal discussion of this question as it related to the wool manufacturing industry, after which the following resolutions were passed:

*Resolved*, That the National Association of Wool Manufacturers favors the passage of legislation permitting manufacturers to fix by contract the prices at which their products may be resold.

*Resolved*, That for the accomplishment of this end, the Association favors the passage of the Stevens-Kelly bill, H. R. 14426, when amended by the addition of a section making it conform to the recommendations of the Federal Trade Commission.

On motion of Mr. Oliver Moses the following resolution covering a change in By-laws of the Association was passed:

*Resolved*, That the National Association of Wool Manufacturers substitute for the By-laws previously in

effect the amended form which has been submitted in print to all members of the Association with the notice for this meeting.

*Resolved*, That this amended form of By-laws be further modified by the substitution of the word "consideration" for the word "adoption" in line 5, paragraph 4, section IV, and by such corrections of typographic or other minor errors as may be necessary.

#### SERVICES OF MR. FREDERIC S. CLARK RECOGNIZED

Mr. Nathaniel Stevens then presented the following resolution, which was unanimously adopted by a rising vote:

The members of the National Association of Wool Manufacturers take this opportunity to record their appreciation of the invaluable services of Frederic S. Clark, who for three years has served as President of the Association.

Mr. Clark, with unsparing devotion and with rare good judgment, has guided the Association's affairs during the time of American participation in the Great War and during the period of readjustment. He has at all times been ready, often at great personal sacrifice, to devote himself energetically to furthering the best interests of the wool manufacturing industry. The Association and the industry as a whole owe him a debt of gratitude they can never fully repay.

As an expression of its valuation of his services, this vote of sincere thanks is passed by the Association at its fifty-sixth annual meeting, and the vote is ordered to be incorporated in the Association's records.

After a few words of appreciation, President Clark called upon the President-elect, Mr. John P. Wood, who spoke briefly concerning his ideas of the work of the Association for the year. Concerning the tariff, Mr. Wood said that he felt that the outstanding idea should be that the tariff must not be settled on the basis of any particular selfish interests, but must be settled on the basis of what is right for the whole country. Speaking more directly of the work of the Association itself, Mr. Wood expressed the view that every effort should be made in the industry and in all industries to avoid duplication of activities and the multiplying of machinery for accomplishing desired ends.

At the request of the Committee on Nominations, the secretary read the following list of nominees which had previously been submitted to the members:

## OFFICERS FOR 1921

## PRESIDENT.

JOHN P. WOOD . . . . . Philadelphia, Pa.

## VICE-PRESIDENTS.

WILLIAM M. WOOD . . . . . Boston, Mass.

GEORGE H. HODGSON . . . . . Cleveland, Ohio.

FRANKLIN W. HOBBS . . . . . Boston, Mass.

## SECRETARY AND TREASURER.

PAUL T. CHERINGTON . . . . . Boston, Mass.

## BOARD OF DIRECTORS.

ANDREW ADIE . . . . . Boston, Mass.

C. BAHNSEN . . . . . New York, N.Y.

CHESTER A. BRAMAN . . . . . New York, N.Y.

JACOB F. BROWN . . . . . Boston, Mass.

FREDERIC S. CLARK . . . . . North Billerica, Mass.

FREDERIC C. DUMAINE . . . . . Boston, Mass.

WALTER ERBEN . . . . . Philadelphia, Pa.

JULIUS FORSTMANN . . . . . Passaic, N.J.

HENRY A. FRANCIS . . . . . Pittsfield, Mass.

LOUIS B. GOODALL . . . . . Sanford, Me.

EDWIN FARNHAM GREENE . . . . . Boston, Mass.

JOSEPH R. GRUNDY . . . . . Philadelphia, Pa.

GEORGE C. HETZEL . . . . . Chester, Pa.

GEORGE E. KUNHARDT . . . . . Lawrence, Mass.

CHARLES W. LEONARD . . . . . Boston, Mass.

JAMES R. MACCOLL . . . . . Pawtucket, R.I.

ARTHUR E. MASON . . . . . Boston, Mass.

WILLIAM MAXWELL . . . . . Rockville, Conn.

FRANK H. METCALF . . . . . Holyoke, Mass.

OLIVER MOSES . . . . . Bath, Me.

THOMAS OAKES . . . . . Bloomfield, N.J.

NATHANIEL STEVENS . . . . . North Andover, Mass.

WILLIAM H. SWEATT . . . . . Boston, Mass.

On motion of Mr. William E. Jones, it was voted that the Secretary should cast a ballot for the entire list of officers and Board of Directors thus nominated. In accordance with these instructions, the Secretary cast a ballot for the entire list, and they were declared duly elected.

## THE TARIFF SITUATION OF 1921.

BRIEF presented at the hearings before the Committee on Ways and Means of the House of Representatives, Washington, D. C., January 31, 1921, by Col. John P. Wood, Chairman of the General Tariff Committee of the National Association of Wool Manufacturers, with which cooperated the Tariff Committee of the American Association of Woolen and Worsted Manufacturers and the National Association of Woolen and Worsted Spinners.

## THE NEED FOR IMMEDIATE ACTION

The first need in tariff legislation is the prompt enactment of an adequately protective temporary law for the existing emergency.

A general revision of the tariff can not be accomplished and made effective in much less than a year. In every previous revision made during the past quarter century from 9 to 11 months have elapsed from the time the work was begun until the new law became operative. The revision now in contemplation will doubtless require longer, because great changes have occurred in the industrial conditions in foreign countries, which must be taken into account to determine what rates are necessary to safeguard domestic industries, and with the utmost diligence it will require many weeks to obtain needed information, which in the past has always been accessible whenever a revision was undertaken. New and intricate factors like the depreciation of exchange, with which previous revisions were not concerned, complicate the problems that must now be solved. And if, as has been proposed, and as seems advisable, the rates are to be applied to a different method of valuation from that which has heretofore been employed, additional time will be required to draft schedules in conformity with the new method. Heretofore revision, however great the change in rates, has been to a large extent accomplished by mere alterations in the existing law. Such a revision as we understand will be made by the new Congress will require the framing of an entirely new



act. However earnest the purpose of Congress, it is unlikely that such a new act can become operative before 1922.

If the present law had been designed as a protective measure, the delay of a year in revising it would not be of serious importance. But the purpose of its enactment having avowedly been to entirely eliminate the principle of protection from our revenue system, imports arriving during the ensuing year would be subject only to the lowest of revenue duties.

The certainty of eventual change from low to higher duties invites large imports for speculative purposes. The only occasion during more than half a century when such a change was made was in the adoption of the Dingley tariff, in 1897. During the months that bill was under consideration vast quantities of foreign merchandise were brought to the United States in expectation of speculative profits. The excess of these imports beyond current consumptive requirements was so large that it was several years before they were all absorbed. And the surplus of supply so depressed the markets for some varieties of merchandise that a considerable period passed after its enactment before the revival and stabilization of business was realized, which that law was designed to accomplish.

If a similar delay should occur now, the result would be more serious and more lasting than then, because the present tariff rates are much lower than those which were superseded by the Dingley Act, the pressure of foreign competition is much greater now than then, and the unusual premium upon importations which the present rates of exchange offer did not then exist.

If a flood of importations greatly in excess of current requirements is permitted to enter the country's commerce during the many months that a general revision will require, domestic business will, if such a thing is possible, be more seriously damaged than if no revision whatever is made, for even those branches of trade which derive benefit indirectly from the protective system would be depressed by the weight of redundant supplies overhanging their markets.

The speculative imports made during the revisionary period in excess of requirements would also largely and adversely affect the Government's income, because if importation of the excess could be deferred until needed, the new and higher rates would apply, and the revenue would be correspondingly increased.

It is for these reasons that we impress upon you the paramount need for a prompt reenactment of one of the former protective tariff laws. Such a law admittedly will not be wholly satisfactory to any one; certain it is that the present

rates of exchange will make most of the duties inadequate, whatever they might have been under prewar conditions. But only a preexisting law can be enacted promptly enough to provide for the present emergency. Any attempt to revise and amend it would inevitably result in the very delay it is sought to avoid. And though the exchange rates may make many of the duties insufficient they will at least be much more effective than those of the present law, in keeping the quantity of imports within the compass of current consumption.

The zeal for revision of those who appear before your committee should therefore be tempered to the acceptance of this temporary measure for their relief, without delaying its adoption to accomplish needed changes which it will be agreed ought to be accomplished in the more permanent act that would supersede the emergency tariff as soon as, with due investigation and deliberation, it can be formulated.

There will also be a need for the enactment of an anti-dumping law such as has already been recommended by your committee.

#### THE PROBLEMS OF INTERNATIONAL EXCHANGE

And some method should be devised to offset the large premium or bounty which the present exchange rates place upon importations. Although this special advantage which foreign goods now have will eventually disappear, it is now, and for a long time will be, a very great handicap to our domestic industries. I am not at this time prepared to offer a concrete remedy. The problem is very complicated. A part of the difference between the gold parities and the exchange rates has unquestionably been offset by a partial adjustment of foreign prices to the depreciated currency. But it is equally certain that the adjustment is only partial. This is clearly shown by a comparison of the ratio of changes in wages to changes in currency values in various European countries.

In addition to this maladjustment of local prices to currency depreciation, there is also a depreciation in actual exchange which is, in part, due to restrictions upon the free movement of gold in settlement of international balances.

Former protective tariff rates will not be sufficient to offset these two extraordinary factors, which together constitute what is commonly referred to as the "exchange situation." The tariff rates should provide against that permanent and continuing difference in production costs which exists independently of the exchange difficulty. The latter, while it lasts,

operates with approximately equal effect upon all import business originating in the same country. But it is to be expected that this special disadvantage will gradually disappear as wages become adjusted to the depreciation of the currency, and as restraints upon the free movement of gold are lifted; it will not, however, entirely disappear for a long time. Legislation to meet this case is very urgently needed now, but it should be quite distinct from the rates of duty.

If the exchange problem can be solved separately, then rates that were sufficient for protection before the war will probably still suffice, and rates then necessary will still be necessary.

#### COMPARATIVE CONVERSION COSTS

Although it is not yet possible, either for us or for the Tariff Commission, to bring to the attention of your committee such definitive comparisons of cost as will demonstrate precisely the difference in cost of production here and abroad, sufficient information is available to show that competitive advantages of foreign manufacture in the woolen industry are much greater now than in the prewar period when a protective tariff on woolen products was necessary.

Chief among these advantages is the relatively lower labor cost of conversion. European wages in terms of the depreciated currencies of Europe have greatly advanced; but measured in the value of United States currency with which the purchase for import is made the difference between wages there and here is much greater than before the war. This is made a matter of common knowledge by the authentic daily reports of the lessened purchasing value of earnings for labor and service in those countries. Exact confirmation is afforded by the interpretation of actual wage schedules in United States currency equivalents, of which I have here several examples, which I submit as part of my testimony.

According to as accurate a computation as it is possible to make from accessible data the ratio of present wages in the industry to the wages paid in 1914, for the principal wool manufacturing countries, converted into United States currency equivalents at the exchange rates, are about as follows:

United States (eastern Massachusetts district)	.....220 per cent of 1914 rates.
Great Britain	.....208½ per cent of their 1914 rates.
France	.....117 per cent of the French 1914 rates.
Germany	.....59 per cent of the German 1914 rates.

These are the percentages of increase of the prewar rates of the respective countries. They are not, therefore, directly

comparable with each other, because the earlier rates were different in each country. To ascertain the present spread between the wages of one of these countries and those of the United States it would be necessary to add to the prewar discrepancy the difference between the actual amounts of the respective increases.

For France the equation is: 120 per cent of United States rates in 1914 — 17 per cent of French rates for 1914 + the difference between the rates of the two countries in 1914 is equal to the present difference between the rates for the United States and France.

For Great Britain the equation is stated in the same way as for France, substituting 108½ per cent for 17 per cent.

German currency has suffered so great a depreciation that the present wages there represent an actual decline by 41 per cent, which decline must be added to the American increase and that sum added to the prewar difference, the formula in the case of Germany being: 120 per cent of United States rates in 1914 + 41 per cent of German rates in 1914 + the 1914 difference between the rates of the two countries equals the present difference between United States and German rates.

No computation of this kind can, with entire accuracy, represent the true averages, because in each country the changes have not affected the wages for all employments alike. Also, averages of rates are not truly representative unless each rate is weighted according to the proportionate number of workers receiving that rate. But the figures I have given are believed to represent the changes with a sufficiently close approximation to accuracy to exhibit the conditions confronting the industry here.

#### INCREASED DISPARITY IN WAGES

There are a number of causes for this increase of disparity in wages, among which the following operate conspicuously:

1. Wages, and certain other kinds of payments, especially such as relate to contracts involving the element of time, do not change inversely to every decline in the value of a depreciating currency. There is what economists term a "lag in adjustment" partly due to public misconception of the changing value of money.

2. Loss of capital and credit by the waste of war stops many former demands for labor, as for construction of all kinds of buildings and equipment, the production of many kinds of goods for domestic use which the people can no longer afford to buy, and the discontinuance of unessential

services. This great curtailment of former kinds of employment results in greater competition in the narrower range of demand for labor.

3. That element in an adverse rate of exchange which is due to restraints upon the settlement of international balances by shipments of gold.

For the present consideration the causes are immaterial. Nor is the subject of the value of the foreign wages for the purchase of living necessities in the local community of any significance under existing conditions. As a matter of fact there is abundant evidence to show that the purchasing power of foreign wages in the countries of Europe from which competitive imports come is much less than before the war, which, of course, indicates an actual decline in wages. But that question, under existing circumstances, is of no importance in the ascertainment of competitive possibilities. The one comparison, and the only one, that does count is between the amount of United States money required to pay for the labor to produce a particular article there and an identical article here. That difference is measured by the disparity between the foreign wage converted into the equivalent in United States currency at the current rate of exchange, and the American wage for the same vocation.

The need for a revision of the present law for the double purpose of producing more revenue, and safeguarding domestic industries, is now so generally recognized that if the present minority party had continued in authority, inevitably it would have substantially increased the present tariff rates, because of the compulsion of a great public exigency.

I wish it were possible to defer the discussion of the particular features of the schedule until after the enactment of a general emergency tariff law, for this being the most complicated and the most controversial of all the schedules requires more time for its explanation than can now be allotted to me in your present program of hearings. I shall, however, in the limited time available, endeavor to touch briefly upon the principal features of the schedule. If there are matters that require further elucidation, at the pleasure of the committee, I shall attend for further interrogation.

Except as it may be necessary in reply to questions, I do not intend to waste your time with any discussion of the merits or the achievements of the policy of protection. Members of the committee on both sides are so thoroughly conversant with all of the arguments that it would not be possible for me to contribute anything new to your abundant knowledge of the subject. Any attempt upon my part to debate the



fundamental principles would only serve to show your superior polemical skill and experience.

I assume that it is your purpose to frame and pass a protective tariff, and that it is preferred the statements of witnesses should relate to that kind of a tariff rather than to argument in support of the theory and policy of protection.

#### THE RAW WOOL DUTIES

It is necessary to begin with the raw-wool duties, for they constitute the foundation upon which the entire schedule is constructed.

What the basic rate should be we do not assume to say. We approve a protective tariff for the industry of wool-growing, believing it to be of great importance that the United States should be as nearly as possible independent of foreign sources of supply for a raw material so necessary as is wool. The experience of our Government throughout the year 1918 sufficiently demonstrated that, and confirmed the wisdom of statesmen of earlier generations who, by reason of experience in the Revolutionary War and the Civil War, undertook to provide for the development of a domestic supply.

Those who are experienced in the needs of the business of woolgrowing will doubtless be able to satisfy your judgment concerning the just and necessary duties on the raw material.

It is needful, however, to always keep in remembrance the fact that no rate of duty on raw wool, however high it may be, will make wool growing successful in the United States unless domestic mills can profitably manufacture all of the home-grown wools.

In any consideration of the wool duties it is necessary to understand that to make the duty effective it must be applied to the wool in its washed and scoured state, and to the wool in manufactured products, as well as to the raw wool in its natural state.

Prior to the enactment of the law of 1867 a large portion of the imported wools were of varieties shrinking upward of 66 per cent. If the duty on scoured wool had been fixed at double instead of treble the rate on grease wools, these heavy shrinking varieties would have been scoured abroad and imported in the scoured state. The treble duty on scoured wool was adopted to protect the domestic wools. And it functioned very effectively. Such wools are still grown in other countries and it will only be necessary to reduce the old ratio between the duties on grease and scoured wools to afford a practical demonstration of why the treble ratio was adopted.

Under our wool tariff the elimination of American compe-



tition for heavy shrink foreign wools tends to depreciate their price in comparison with those suitable for the American trade; or, what amounts to the same thing, American competition for the light wools enhances their market value in comparison with those of varieties which can not advantageously be brought into the United States. The effect of this is to give the European manufacturer some advantage in the cost of his wools. Hence, although these wools in their raw state were prevented from unfairly competing with similar domestic wools, they would, nevertheless, have competed with the latter just as effectively in the manufactured state if the duty on the wool in manufactured goods had not been fixed at the proper ratio to the scoured-wool duty.

The ratios of duty on wool in washed and scoured state were devised originally by woolgrowers, who thoroughly understood the needs of their industry and were able to convince Congress that the ratios were correct.

If it should be preferred to apply the basic duty to scoured wool or to the scoured content of greasy wool, the duties on the wool in manufactured and partly manufactured products (the so-called compensatory duties) can be converted into ratios of scoured wool, for in the old schedule they were in definite proportion to the scoured wool duty (namely, as  $3\frac{1}{3}$ ,  $3\frac{1}{2}$ , and 4 to 3 of scoured wool).

But such a change in the application of the basic duty to scoured wool would only serve to subject the domestic wools to the competition of a much wider range of foreign wools, and would eventually convince the growers that their former representatives had a thorough comprehension of all the facts.

If, however, the scoured content method should be adopted the ratios for the duties on the wool in tops, yarn, and cloths should be those indicated in the report of the Tariff Board which were:

“For tops, one and one-tenth times the scoured wool duty. For yarns, one and two-tenths times the scoured wool duty. For cloths, one and one-half times the scoured wool duty.”

If a specific duty of so many cents a pound is laid upon raw wool in its natural state, and the same duty is applied to washed wool, none would be imported in the natural condition, for it would be more advantageous to the importer to have the wool washed before it was shipped to the United States.

If the duty on washed wool was made higher than that on the raw wool in the natural condition, and the increase was sufficient to cover the shrinkage in weight due to washing, but the same rate of duty was applied to scoured wool as to washed wool, then neither greasy wool nor washed wool would

be brought into the United States from abroad, for it would be more advantageous to the importers to have it scoured before it was shipped here. It is, therefore, necessary to have a proportionately higher duty on scoured wool than on washed wool.

#### THE DUTIES ON WOOL IN MANUFACTURE

For precisely the same reasons it is necessary to have rates of duty on the wool contained in manufactured articles which are higher than the wool duties, in proportion to the shrinkage which the contained wool has experienced in its progress from the natural condition to the stage in which it is imported. If the duty on the wool in "tops" (the first form in which manufactured wool becomes an article of commerce) is no higher than that on scoured wool then neither greasy wool, washed wool, nor scoured wool would be imported, because it would be more advantageous to the importers to have their wool converted into tops before it is brought here.

If the duty per pound on the wool in yarn is no higher than the duty on wool in tops, neither raw wool nor wool in the form of tops would be imported, because the importers would have less wool duty to pay if they had all their wool made into yarn before importing it.

If the duty on the wool in cloth is no higher per pound than the duty on yarn, then neither raw wool, tops, nor yarns would be brought into the United States, because the importers would have less wool duty to pay for a given amount of wool, if they had it manufactured into goods abroad and then brought it here in the form of cloth.

It is evident, therefore, that a duty on wool in the natural state necessarily implies a duty on the wool in each commercial stage of its progress in manufacture. These are all wool duties, and, so far as the protective feature of the tariff is concerned, they all have for their primary purpose the protection of the wool-growing industry. These duties on the wool in manufactured and partly manufactured articles are not for the protection of wool manufacturing, and must be considered quite independently of duties intended for the protection and preservation of the domestic manufacturing industry.

The duties on the wool contained in tops, yarns, and cloths should be incorporated in the same paragraph with the duties on raw wool, because they pertain to the duty on wool and necessarily change with any change in the basic duty on wool.

In this connection there are two important factors which must be kept in mind, viz.:

1. No matter how high a duty is placed on raw wool, as I said before, it will afford no benefit to wool growers unless the duty on the wool contained in manufactured products is sufficient to fully equal the duty which would have been charged on the identical wool in such goods, if it had been brought into the United States in its natural condition.

2. A protective duty on wool will be of no benefit to the domestic wool growers unless their wool can be used in American mills: for if domestic mills can not operate profitably the home-grown wool would have to be sold abroad, and if sold abroad it would derive no benefit from the United States tariff on imported wools.

To make a wool duty effective for the encouragement and protection of the domestic wool-growing industry it is obviously necessary that the wool be manufactured in the United States, and to make that possible it is equally essential that the right amount of duty be charged against the wool in imported goods, and that in addition thereto adequate duties be provided for the protection of the manufacturing of wool.

There are consequently two distinct duties to be considered for the benefit of the domestic wool-growing industry: (*a*) The duty on the wool itself, whether in raw or manufactured state; (*b*) and the duty for the protection of the manufacture of wool, without which the home-grown wool would have no home consumers and therefore would not be benefited by even the wool duty.

In whatever form the duties are applied, these elementary facts are equally true; it matters not whether the two distinct forms of duty are levied separately, or whether they are combined in one total duty, or whether applied in two separate rates the sum of which is correct and proper, but which, in some particular cases, may not happen, in their respective parts, to exactly correspond with the separate requirements.

If all wools were substantially alike in the amount of their shrinkage in washing and scouring and in the amount of their wastage in manufacture, the problem of determining the proportionate rates of duty for the different states in which wool is imported would be extremely simple. The duty applicable to each state would be to the raw wool duty exactly inverse to the proportion which the weight of the wool in that state bore to the weight of the identical wool in its natural condition.

THE RATIOS BETWEEN GREASE WOOL, WASHED WOOL AND SCoured  
WOOL DUTIES

But owing to the infinite variations in the shrinkage and wastage of different varieties of wool, grown under different climatic conditions, no one ratio for wool in any given State will be exactly correct for all wools in that State. It is, therefore, necessary to adopt rates which will be sufficient to protect the bulk of the domestic wools. For example, there are foreign wools which in scouring only lose one-half of their original weight. So far as such wools are concerned, the duty on scoured wool need only be twice the duty on wool in the grease. But if that ratio should be adopted, all wools which lose more than half their weight in scouring would be imported in the scoured condition, to the detriment of domestic wools. And the lower net duties to which these scoured wools would be subject would give them such an advantage in market price as would discourage the importation of lighter shrinkage wools in the greasy state.

This can be made clear by an illustration, using the old rate of duty on unwashed wool, which was 11 cents per pound. If the duty on scoured wool had been in the ratio mentioned above, it would have been 22 cents per pound. Under these rates foreign wool of a shrinkage of  $66\frac{2}{3}$  per cent (that is, wool which would lose two-thirds of its weight in scouring) would pay 33 cents per clean pound if imported before scouring, but only 22 cents per clean pound if scoured abroad and imported in the clean state, viz.:

Three pounds imported in grease at 11 cents duty, scoured in the United States, would yield 1 pound clean, for which 1 pound the duty cost would be 33 cents.

If the same three pounds were scoured abroad, the resulting 1 pound of clean wool would be imported at the rate for scoured wool of 22 cents.

A very large proportion of the foreign wools that are competitive with those grown in the United States are of kinds which in their natural condition shrink in scouring by as much as 60 to 68 per cent of their weight; it is therefore necessary when a basic rate of duty on wool in the greasy state has been decided to make the rate on scoured wool such as will not permit the importation of wools in a scoured state at less cost for duty than would have been paid if they had been imported in their natural condition. The old rate on scoured wool was made 33 cents (i. e., three times the duty on greasy wool) to meet that requirement, and was effective for all wools of a shrinkage of  $66\frac{2}{3}$  per cent or less, which comprised all but a negligible quantity of competing foreign wools.

In recent years it has sometimes been alleged that the domestic woolgrowers did not derive the full benefit contemplated by the rate on scoured wool, because grease wools imported under a duty of 11 cents, which did have less shrinkage than  $66\frac{2}{3}$  per cent did not pay an amount equivalent to 33 cents upon the scoured pound. But that contention entirely overlooks the original purpose, which was to make the duty on grease wool so much per pound and to assure that all the wool of the kinds subject to that duty (class I) would pay at least the equivalent of 11 cents per greasy pound. The basic duty upon which all the wool duties were constructed was that for greasy wool. In the earlier tariff laws, prior to 1867, separate and distinct rates of duty had not been provided for washed and scoured wools, the rates being equally applicable to wools of the same value, whether in natural condition or washed or scoured. In the war tariff of 1864 the wool rates ranged from 3 cents a pound for those of the lower value to 12 cents a pound and 10 per cent ad valorem, for those of the higher value, irrespective of the condition in which imported.

The tariff of 1867 was the first to contain provision for wool duties progressively increased for washed and scoured wool, in prescribed ratios to the duty on grease wool. In this act the highest duty on clothing wool in the greasy state was the same as the highest rate for all wool, including scoured, in the act of 1864; which plainly indicates that when the graduated method was adopted the basic rate was the duty on wool in the greasy state, and that the rates provided for washed and scoured wools were intended to assure that all wool imported would pay not less than the equivalent of the basic rate on greasy wool.

In all fiscal laws which have to embrace a wide and complicated range of cases by a general provision, the application can not be exactly equal in each case. This is notably true of various forms of income tax laws, in respect to which, however, commercial competition can not provide a corrective, such as occurs in connection with inequalities of application of a tariff rate.

In the matter of tariff rates, apparent inequalities of application are quite generally neutralized by the competitive conditions of commerce. If, for example, a certain class of wool can be more advantageously imported under a given rate, competition in foreign markets for that particular class tends to enhance its price relatively to the prices of other kinds.

The important thing is to determine what the basic rate should be, and what corresponding rates are needful to make



certain that in whatever form the importation is made the duty collected will be not less than the equivalent of the basic rate.

In this explanation the illustration used has been the relationship of the duty on scoured wool to the basic duty on greasy wool; but the principle involved is precisely the same for washed wool, and for the wool in manufactured or partly manufactured products; namely: Having determined the proper basic rates, those rates assigned to wool in more advanced stages must bear such a ratio to the basic rate as will make certain of the collection of not less than the equivalent of the latter in every case. Such seeming inequalities as may appear are almost always theoretical, being generally offset by competitive conditions created by the seeming inequalities. Of this a number of examples are given in the report of the Tariff Board.

#### THE EXEMPTION OF SKIRTED WOOLS

There has been a great deal of misunderstanding, and no little misrepresentation about the clause in paragraph 368 of the act of 1909 which excepts skirted wools as imported in 1890 and prior thereto from the double duty provided in that paragraph. The provisions of the entire paragraph, including the exception of skirted wools, appeared in the tariff of 1890, and were repeated in the acts of 1897 and 1909.

Skirted wools are such as have had the ends of locks matted with dirt and the coarsest wool, grown on the extremities of the fleece, removed before marketing.

The custom of skirting wools was adopted for economic reasons, without reference to the American tariff and long before we had a form of duty which could give rise to any question upon the subject. Evidence has been produced showing that large quantities of such wools were imported into the United States from various countries as long ago as 1866. In 1873 the New Zealand woolgrowers requested opinions from the Bradford Chamber of Commerce, and from English buyers of wool, as to the method of skirting that would give the most satisfactory results to the consumers of wool in Great Britain. A large portion of the wools shipped to all those wool-importing countries that have no duty on wool is in skirted condition. And, under our acts of 1894 and 1913, when there has been no American duty on wool, the practice has been continued.

As for the effect of the skirting, testimony, which has never been controverted, was presented to the Ways and Means Committee in 1908-9 showing that the average reduction



in shrinkage due to skirting was about  $2\frac{1}{2}$  per cent and that the enhancement in cost averaged about 5 per cent. The difference in the wool duty is, therefore, negligible.

If the skirting attains the proportion of a sorting of the fleece, such wool, under the provisions of paragraph 368 of the old act, was subject to double duty.

Former Senator Dixon is authority for the statement that when the adoption of the new paragraph was under consideration in 1890 Mr. McKinley favored a duty of 8 cents, without excepting the skirted wools from the provisions of that paragraph, but finally agreed to a duty of 11 cents with the skirting clause included. (Speech in U. S. Senate July 28, 1911.) It is, therefore, evident that at the time the skirting clause was adopted the representatives of the wool-growers were very well satisfied with the arrangement which gave them a substantially higher rate of duty on all wools of Class I, on unskirted as well as on skirted, than would have been adopted had the skirting clause been omitted.

The omission of the clause referring to skirted wools would have the effect of doubling the duty, because of a difference in condition averaging but  $2\frac{1}{2}$  per cent. If it is considered important to provide a separate duty for this inconsequential difference in shrinkage it should be a difference of about one-half cent between the duty on skirted and that on unskirted wool. And as so large a proportion of the wools of commerce are marketed in skirted condition the basic duty, whatever the rate, should be on such wools, with provision for a reduction of, say, one-half to one cent per pound on greasy wools imported unskirted.

It should be noted, however, that the difference caused by skirting is generally so slight that the officials of the customs service have testified that it would be impracticable for the customs examiners, in most cases, to determine whether fleeces had been skirted. Upon a former occasion, when this subject was under consideration, skirted and unskirted fleeces were exhibited here in Washington, and not even the experienced woolgrowers who were present could distinguish between them.

At the hearings recently held upon the emergency tariff bill, Mr. Hagenbarth, president of the Wool Growers' Association, volunteered the opinion that the doubling of duty on skirted wools (by omitting the excepting clause) would be excessive.

#### WASHED WOOLS OF CLASS II

In all of the tariff laws in which a duty was placed upon wool, from that of 1867 to the last one enacted in 1909, wools

of Class II imported in a washed condition were made dutiable at the single rate of 12 cents, while the washed wools of Class I were dutiable at the rate of 22 cents (being double the 11-cent duty on unwashed wools of the same class). This seeming anomaly has sometimes been criticized because the reasons for which the distinction was made were not understood. The wools of Class II are of entirely different character, origin, and use from those of Class I, and are not competitive with the latter. A mere statement of the facts will be sufficient to explain why a lower rate of duty was originally applied to those wools.

The sheep from which they are obtained are of much larger size, and because of their greater weight, the proceeds realized from their sale for mutton is considerably greater than can be obtained for the sheep that produce the Class I wools. For this reason the woolgrowers themselves considered a less degree of protection was necessary on these wools than on those obtained from the smaller breeds which produce the Class I wools.

These sheep are grown primarily for mutton; from them are obtained the large English mutton chops, saddles, and shoulders of mutton so popular in England and in English colonies. Americans are not a mutton-eating people, their preference being for lamb; consequently very few sheep of these large English breeds have been grown in the United States.

The Class II wool generally is coarse, lustrous, and very long, unsuitable for the manufacture of regular cloths. It is chiefly used for coat linings, braids, and some varieties of lustrous dress goods, for which Class I wools are not adapted.

Its use is for specialties, made in but few mills, and different types of machinery are required for its preparation from those employed in most woolen mills. Probably less than 5 per cent of the woolen mills of the United States use any of the Class II wools.

The total imports of Class II wools have never amounted to more than a small fraction of the aggregate quantity of wools imported. The yearly average for the 10-year period 1904-1913 being 17,716,101 pounds of a yearly average total of 201,108,881 of all wools imported; that is, for the 10-year period the importations of Class II wools and mohair, which were reported together, were 8.8 per cent of all wools imported. For the past three years 1918, 1919, and 1920 the average importations of Class II have been but 8,764,618 pounds, or 2.15 per cent of the wool imports for the same period. During these same years the imports of mohair averaged 3,067,384 pounds, or 1½ per cent, and of Class II wool

and mohair together the importations were only 4.65 per cent of all wool imported.

The classification was first introduced in the tariff law of 1867, and when that act was under consideration it was proposed to make the wools of Class II free of duty. The lower rate was finally agreed upon as fairly providing a degree of protection for those wools comparable with that accorded to Class I wools.

The duty was intended to apply to importations in the washed state because it had always been the custom, both in England and Canada, to wash the sheep before shearing, and from time immemorial the wools of Class II had been marketed by the grower in the washed state. When the duty of 12 cents on the washed state was adopted it would have been logical to have fixed the duty on unwashed wool of that class at a proportionately less rate. But it was so exceptional for any of this kind of wool to be sent to market in an unwashed state that it was probably considered needless to multiply phraseology for a useless purpose.

With an adequately protective duty on the products of Class II wools it is immaterial to those who use them whether the washed wools are made dutiable at a single or a double duty. If, for the sake of symmetry, it is considered necessary to apply a double duty to the washed wools of this class, then the rate for unwashed wool of the same varieties should be made lower than the rate for unwashed wool of Class I, for certainly the latter needs more protection than the former.

It should be noted also that the words "clothing" and "combing" as applied respectively to Class I and Class II though correct when originally adopted are now misnomers, because improvements in the machinery employed for combing have made a large proportion of the so-called clothing wools available for manufacture by the combing or worsted system. The use of the word "combing" as a descriptive for Class II wools should therefore be discontinued.

In connection with the duty on Class II wools the specific duty on goods into which these wools enter must be considered. But as that subject was discussed at some length by me at a former hearing of the Ways and Means Committee I need not occupy your time with a repetition of what was then said, but will ask you to refer to the concluding paragraphs of the remarks on compound duties which will be found at page 3981, hearings No. 19, January 27, 1913.

The features of the old tariff to which I have referred have been the chief points of controversy; they all relate primarily to the wool duty.

## PROTECTIVE DUTIES ON MANUFACTURES

Protective duties on manufactures of wool need be no higher nor more complicated than those levied upon most other kinds of manufactures if it were not necessary to also collect a duty on the wool contained in the manufactured article. That duty is imposed in the public interest, to assure the production of an abundant supply of home-grown wool for national needs. In justice to both branches of industry the two duties should be dissociated.

With few exceptions the ad valorem rates on manufactures of wool in the former schedules, if applied in specific form would, under conditions then prevailing, have been effective. And the reasonableness of those rates is attested by the fact that they were generally adopted in the Wilson tariff of 1894. Their failure in that act was because they were applied in ad valorem form at a time of exceedingly low foreign values, and also because of the facility with which importations can be undervalued when subject to ad valorem rates.

It would be a very great improvement upon the old schedule if the protective rate on goods could be made specific. In the case of tops and yarns it was thought this might be practicable, but later investigation has developed difficulties in applying specific rates to these articles, for which the problem is much less complicated than in the case of cloths.

Specific duties on cloth are more difficult of formulation because of the infinite variety of manufactured goods, the variations in the conversion cost of which bear but little relation to either their weight or texture count. True specific duties based upon count or measure, if sufficient to protect the goods of higher cost, would in many cases show an apparently excessive amount of duty on goods of lower value. To overcome these objections it has been proposed to make rates partly specific and partly ad valorem, varying according to graduated steps of value. Such rates are not truly specific, being in fact determined by values, but the Tariff Board reported that they would to a degree obviate the high ad valorem equivalents which the old rates produced on goods of the cheapest cost. We have shown in former statements to the Committee on Ways and Means that the ad valorem equivalents on low-priced goods, which have sometimes been the subject of criticism, were without real significance, because it has in the past been the declared purpose of the Government to exclude low-grade goods of inferior quality, and the Tariff Board reported that for other low-priced goods domestic competition had effectually prevented the enhancement of domes-

tic prices by any such *ad valorem*s as opponents of the industry had alleged.

Mr. Julius Forstmann has suggested a method of applying the duties in specific form by computing the rate for each class of goods at a percentage of the conversion cost, the uniform percentage to be fixed in the act, and the conversion costs to which the percentage would be applied to be ascertained by the Tariff Commission. The plan, I believe, is scientifically correct; its practicability could only be definitely determined by trial. The method is worthy of careful study and might be made the subject for a special report to your committee. If found to be practicable in administration, a sufficient time would have to be allowed for the Tariff Commission to ascertain the conversion costs for the various groups of manufactures before the new system could come into operation.

#### PREREQUISITES TO DECISION UPON AMOUNT OF DUTY

It is not possible to propose for your consideration definite rates of duty until it is known (1) what rate of duty it is proposed to place on raw wool, (2) in what manner the wool duty is to be applied, and (3) whether the disadvantage in the present rates of exchange are to be provided against by separate legislation or whether the tariff rates must also provide the protection to offset that bonus to the foreign producer. As soon as these factors are made known we can formulate definitive recommendations with regard to rates.

In advocating necessary tariff legislation those who are engaged in wool manufacture seek no special privilege. They are not supplicants for favors. That industry exists in this country to-day because statesmen of earlier generations conceived it to be for the national interest that the United States should be industrially independent. To achieve that result they enacted tariff laws which made possible the development of domestic wool manufacturing to its present proportions. As a result of that policy their purpose has been realized. American mills are now able to produce all kinds of woollen products in quantities sufficient to supply the entire requirements of the whole population, and in quality equal to the best made anywhere. That this industry is a great national asset was conclusively shown during the war. If the advantages of its possession are still desired there are conditions necessary to its continued existence which must be recreated. These conditions can be stated by those whose training and experience in the business have given them knowledge of the facts. The responsibility for the decision is yours, and it is a very grave responsibility.



There is a degree of tariff protection that will accomplish the result; anything less is altogether futile except for the purpose of revenue. There can be no compromise with the principle. Two-thirds of the required rates will not accomplish two-thirds of the purpose, but will entirely and completely fail of that end.

On the other hand, no rates that can be prescribed will make excessive profits possible for an industry that has a productive capacity more than equal to home consumption, and which, for obvious reasons, can not command foreign markets.

Intensive domestic competition between upward of a thousand separate and wholly independent establishments makes it impossible to obtain returns greater than those common to other branches of trade, which entail equal risk and skill. I make this statement deliberately and with entire confidence in its accuracy, well knowing with what zealous haste some opponents of the protective policy will seek to confront me with a few exceptional cases in which greater returns have been attained by reason of circumstances in no way related to the tariff. The proper test of the assertion is by the average experience over a term of years of the entire industry, in comparison with equally general experience of other kinds of business during an identical period of time. By that test the wool manufacture will be found to have been less profitable than almost any other of the great branches of business, whether industrial, mercantile, financial, or transportation.

It is not controlled by any trust or combination; it possesses neither monopoly nor special privilege. The small plant is at no disadvantage because of its smaller size, some of the smallest having been relatively the most successful. Therefore whatever of opportunity the business affords is open to all, which is sufficiently attested by the fact that new enterprises in this field are usually undertaken by men who have previously been employees.

The shares of many long established and well managed mills can be purchased in the open market at prices much below their property value, and in amounts so small that any investor who believes the profits of the mills are temptingly large can share in the ownership of the business.

If the profits of wool manufacturing exceeded those of other kinds of business capital would flow to it much more freely than it has ever been observed to do. It has never been attractive to the promoter, and stocks of wool manufacturing companies have been conspicuously absent from the myriads of new securities offered to the public by investment bankers.



## THE TARIFF AND THE FOREIGN DEBTS

There appears to be a very great concern in the minds of some people because of a fear that an upward revision of tariff rates may make it difficult for European countries to pay their debts to us. There is just about as much sense in that theory as there would be in the assumption that the coal merchant from whom I buy my coal could not be paid unless he bought from me woolen goods equal in value to the price of the coal supplied to me. In the most primitive condition of society, when there was no conception of money of account, banking, or commerce, such transactions by simple barter were, of course, necessary. That a modern banker should believe international commerce in this age must be conducted by such elementary methods is difficult to understand.

If American mills are fully employed they require all of the home grown wool and, in addition, about 300,000,000 pounds more which must be imported from various foreign countries, Australia, New Zealand, South America, South Africa. American mills can not export woolen goods to these countries for precisely the same reason that a protective tariff is needed. Great Britain and Germany can and must sell woolen goods to those countries. If we buy wool in Argentina, the Argentines must buy clothing from Germany, and Germans buy food from the United States, the triangular indebtedness is readily extinguished in the international clearing house and reciprocal trade can be carried on in the future, as has long been done in the past. What is true of the commodities mentioned is equally true of many others which we can and do import without prejudice to domestic industry.

The obsession that in order to collect indebtedness from foreign countries it will be necessary to destroy American industries that are of vital importance to the country is unworthy of anyone who understands the currents of the world's commerce.

If a protective tariff is not necessary that would be the sufficient reason for not making protective rates, and recourse to the balance of trade argument would be superfluous. If protective rates are necessary, then failure to enact them would inevitably result in a decrease of employment proportionate to the displacement of home-made goods by importations. As the mills of this country are able to produce its total requirements in manufactures of wool it must follow that for every importation of 7,500 yards of foreign fabric an American loom and all the carding, combing, spinning, dyeing and finishing machinery contributing to that loom must stand idle for a year. For every \$10,000 of such imports unemployment

is caused equivalent to the idleness of five employees for one year; or else the employees displaced must seek work in other kinds of business, and thereby add to competition for employment. If, by the addition of their labor to some kind of production which does not require protection and can be exported, then the increase in export adds to the amount of foreign indebtedness due the United States and re-creates the situation to avoid which home industry was sacrificed.

The financial gentlemen who are so keen about increasing importations need some enlightenment as to the relative magnitude and importance of the domestic market.

#### CHANGES SUGGESTED IN THE INTEREST OF ACCURACY

Entirely apart from the subject of rates of duty there are a number of changes in phraseology, and other amendments to paragraphs in the present schedule which are necessary to remove ambiguity, correct inequalities, and simplify administration.

To some of these, which have been developed in the trial of cases by the Government's attorneys, brief reference will now be made.

Paragraph 289: The term "flannel" should be eliminated because the significance of the word has so completely changed that its employment as a descriptive term for the purposes of the customs revenue, causes confusion, endless misunderstanding, and great expense to the Government for the countless appeals that are made from the decisions of appraisers.

Originally the word "flannel" was the name for a woolen fabric of quite definite characteristics, at one time largely used as the material of which winter underwear was made. It was for such material, used for underwear, that a rate of duty was provided in several of the former tariff acts, which was lower than the rate applicable to other woolen cloths.

When the present law was enacted the words "for underwear" were omitted from this paragraph, thus making the rate applicable to anything which might, by modern commercial usage, be designated as "flannel."

This omission would have made no important difference if the word "flannel" was still applied only to the original product. But in the course of the last 50 years two important changes, quite distinct from each other, have occurred, which have given to the word an entirely different connotation. The first was the practically complete displacement of the old time flannel by knitted underwear now in almost universal use. The other was the application of the word "flannel" to many

different fabrics, differing both in character and use, from that to which the name was once applied exclusively.

These modern fabrics not only differ from the original flannel, but also differ widely from each other in respect to every attribute of the original fabric, so that it has been found to be impossible to frame any definition which would be inclusive only of flannels, and exclusive of all cloths not flannels.

Moreover, every one of these modern so-called flannels has, to a greater or less degree, the characteristics of other woolen and worsted goods, so that any description that would cover all of the goods now sold as flannels would include almost every other kind of woolen or worsted cloth now manufactured.

In consequence of this situation, the dockets of the general appraisers' courts have been crowded with contested cases of goods imported as flannels, which have been classified by the Government examiners as cloths. Under the circumstances, there has been an inevitable conflict of decisions upon the appealed cases.

Officials of the Attorney General's department have sought to avoid the great expense and waste of time which these cases involve, by a stipulation between the Government and the importers, as to which kind of fabric should be considered flannels, and which should be classed as cloths. But this has been found to be unsatisfactory because, owing to changes of fashion, new types constantly appear, and the styles which were the subject of agreement become obsolete. It is also impracticable to have all importers obligated to any such informal understanding.

It is also to be noted that the original flannel was of simple construction, somewhat less costly to manufacture than other cloths, and in the nature of a necessity, while the goods now largely sold under the name of flannel, are more highly finished productions, costing more to manufacture, and to a large extent belong to the class of luxuries or semi-luxuries, being largely used as material for such articles as silk-striped shirts, sport jackets, trousers for cricket, and for yachting.

If the words "for underwear" which were included in former acts, are incorporated in the new law, the existing difficulties will be eliminated, and the Government saved much expense. But as "flannels for underwear" have become obsolete, it would be better to omit the word entirely.

To illustrate to what different kinds of goods the term flannel is applied, and their widely variant characteristics, a number of samples are submitted herewith, which I shall be glad to leave with the committee.

Paragraph 287: The paragraph relating to woolen and

worsted yarns makes no distinction between plain yarns in the natural color, and those which have been bleached, dyed, printed, or otherwise advanced in manufacture.

In the cotton Schedule I (paragraph 250) higher rates are specified for yarns which have been "combed, bleached, dyed, mercerized, or colored." A similar distinction should be made in the case of woolen and worsted yarns, and for the identical reasons which apply in the case of cotton yarns.

Paragraph 289: Automobile robes and traveling rugs are claimed by importers to be blankets and dutiable under paragraph 289. As they are of an entirely different character from blankets, used for different purposes, and of more costly manufacture, they have been classified by the customs officials under paragraph 288. But on appeal by the importers these robes and rugs have been held dutiable as blankets. Since none of the reasons for which a lower rate of duty is assigned to blankets are applicable to these articles, they should be specifically excluded from the blanket paragraph (No. 289), and included in the paragraph relating to cloths and all manufactures of wool not specially provided for, which is No. 288.

#### DETAILS OF THE CARPET SCHEDULE

Carpets woven whole for rooms, paragraph 300: The language of this paragraph is very ambiguous and has invited a contention that the word "similar" has reference to the quality of such carpets as "Oriental," "Berlin," "Aubusson," "Axminster," instead of to the fact of their being woven whole for rooms.

If the latter interpretation prevails certain kinds of carpets woven whole for rooms, such as Wilton, Smyrna, and others not particularly named in paragraph 300, would be subject to a duty of 15 per cent less under paragraph 303.

The language of paragraph 300 would better express the intent if amended to read:

Carpets of every description, woven whole for rooms, and all other rugs similarly woven whole for rooms.

Paragraph 303 which is intended to include (among other items) mats and rugs of the smaller sort which are not woven whole for rooms, is liable to misinterpretation because of the inclusion of the word rugs which is also employed in paragraph 300. It is, therefore, recommended that the word "rugs" be omitted from paragraph 303, or else that it be limited by such qualifying term as will not be inclusive of the rugs to which paragraph 300 is intended to apply.

Paragraph 301: A material known as baize, a variety of cloth which appears to have been at some time, somewhere,

designated in trade as bocking; and an effort was made to have an importation of such material classified under paragraph 301.

It is suggested that the words "for floor coverings" be inserted after the word "bockings" to avoid any misconception.

Veils, paragraph 358: After veils, veilings, insert the word "falls" to provide for a kind of veil or veiling used to cover the faces of infants, which is known in the trade by the name "wool falls." This term not being specifically included in the paragraph an effort has been made to have them classified under paragraph 291 at a much lower rate. In the case mentioned the Government's classification was upheld; but under the existing practice there is nothing to deter an appeal in other similar cases, with the chance that some slight difference in the testimony of witnesses may lead to an opposite judgment. In such manner the same issues regarding classification of imports under various paragraphs are repeatedly tried; the appellants having nothing to lose from an adverse decision, and much to gain from one favoring their contention.

#### FREE IMPORTATION OF SAMPLES

Much complaint has been made concerning the free importation of samples. Importers object to the cutting or punching of samples, because such mutilation impairs their appearance for sample purposes. And with regard to some classes of goods there is justification for the objection. On the other hand, many kinds of samples, after they have fulfilled their purpose as such, if not mutilated, can be sold as merchandise. The cost of making the samples is at least as great as for the manufacture of an equal quantity of the goods they represent, and that cost is necessarily higher for the American manufacturer for the identical reasons that the goods themselves cost more.

Since the samples are a necessary element in the expense of selling the goods, the seller of the foreign goods should not have the advantage of a lower cost for his samples than the domestic manufacturer has to incur for the samples of domestic goods.

It is therefore recommended that all samples of imported textiles be made subject to the same rates of duty and the same valuation for identical units of quantity as the goods they represent. Besides being more just to home manufacturers, it would entirely obviate the necessity for the present requirement of mutilation, of which so much complaint has been justly made.



This suggestion has particular reference to samples which are retained in the United States after importation, and its adoption need not interfere with the privilege now accorded for samples brought here temporarily which could be admitted free under bond for reexportation within six months, as now provided in paragraph J, subsection 4, of the act of 1913.

In any provisions relating to mohair and alpaca or to noils and waste of mohair and alpaca, consideration should be given to a decision of the United States Court of Customs Appeals reported in Treasury Decisions No. 19, vol. 28 (May 13, 1915), page 52, in which it was held that mohair and alpaca noils and waste are free of duty under paragraph 651 because they are *wool* wastes, although the act (of 1913) classified mohair and alpaca as distinct from wool and made them dutiable at 15 per cent, whereas wool was placed on the free list.

If the wool duty is to apply to wool imported on the skin, the language of the provision for such duty must have regard for a decision of the customs court in which it was held that lambskins are not sheepskins.

#### METHODS OF CUSTOMS PROCEDURE

Under the present methods of procedure it is exceedingly difficult for the Government to offer testimony that will be acceptable to the general appraisers; for these (among other) reasons:

1. The testimony of the Government's own expert examiners is given little or no consideration because they have not actually bought and sold the goods under consideration. Repeatedly the testimony of the Government's experts is thrown out for that reason.

2. The testimony of the domestic manufacturer as to the designation or names by which goods are known in the United States is not accepted unless he has actually, in person, bought or sold such articles at wholesale in the regular course of trade. The absurdity of this is apparent when the proprietor or principal manager of a mill who has made the goods for a generation, studied them in all markets, discussed them with customers and competitors, perhaps even given them their trade name, can not testify as to commercial designation, though a junior salesman of relatively brief experience and entirely without technical knowledge is accepted as a competent witness.

3. For values, the evidence of published market reports, the information of those familiar with the markets, even the testimony of those who have bought similar goods, is not admitted unless a delivery can be shown to have been actually



made of practically identical goods. The general appraisers will accept nothing in the way of constructive evidence as, for example, such as would show a recognized relationship between the prices of different sizes, or different grades, of the same kind of article.

In the administrative section of the law provision should be made to reduce the vast number of protests that are now made. This could probably be partly accomplished by imposing on protestants who abandon their cases before hearing or whose protests are not sustained in any particular, a stated sum to cover the Government costs and expenses in receiving the protest, making the necessary records in connection therewith, and for the time of the Government counsel in giving the case consideration and preparing for hearing.

Because of the successful efforts which have been made to evade the inclusion of the cost of sponging or shrinking, and examining in the appraised value of imported cloths that have been shrunk before importation, the law should contain a specific requirement that goods which have been subjected to the shrinking process after purchase but before importation should be subject to duty on the cost of the shrinking, and the examining which is incidental to the process; or else, the duty upon shrunk fabrics should be slightly higher than on those that have not been shrunk. Goods so treated have been improved in condition and sell for a higher price than identical goods that have not been so treated.

The process also reduces the original length of the pieces making it possible to invoice the reduced yardage at the price per yard of the unshrunk goods.

The Government has made several attempts to include the shrinkage costs in the dutiable value, but has been defeated because the existing law does not make specific provision therefor.

A detailed report on the subject of shrinking woolen cloth was made to the Secretary of the Treasury under date of August 21, 1916, by one of the special commissioners of the Treasury Department, who made an examination of the method, pursuant to instructions from the department. Reference is made to that report for a detailed account of the procedure, the effect upon the cloth, and the cost of the work; which latter has, of course, been substantially increased since that time.

When cloths are imported in short lengths suitable for individual use, they should be valued at a higher price than similar cloths imported in whole pieces; because such lengths have incurred the expenses incident to the jobbing business, and are resalable at a substantially enhanced price.

It is suggested that subsection No. 18 of section No. 28 of the tariff act of 1909 be amended by including therein the cost of any extra or additional work done, to, or upon, the merchandise after purchase, such as damping, sponging, shrinking, examining, inspecting, or cutting into suiting or garment lengths. Or, in lieu of such a provision, that there be added to paragraph 288 (act of 1913) the following clause:

And upon all cloths which have been subject to the process of damping, sponging, or shrinking, or which have been cut to garment or suiting length, 2 per centum ad valorem in addition to the previously mentioned duty imposed in this paragraph. Cloths which have been so treated shall be invoiced for duty as of the length before shrinkage.

Paragraph 443 of the act of 1909 was omitted from the present (1913) law. It should be included in the new bill. The purpose of this paragraph is to assign certain plushes and woven fabrics, of which goat, camel, or alpaca hair is a component, to the woolen schedule, where they properly belong.

In the act of 1909 braids were included in paragraph 383. They were omitted from the corresponding paragraph (292) of the act of 1913 and placed in paragraph 358 of the present law. This mistake should be corrected by restoring braids to the former classification with webbings, etc., i. e., paragraph 292, act of 1913, and paragraph 383, act of 1909.

The CHAIRMAN. What was the date of that report which you refer to?

Mr. WOOD. 1916.

The CHAIRMAN. August, 1916?

Mr. WOOD. August 21, 1916. It was a very extensive and detailed report and very accurately reports the custom.

The CHAIRMAN. Mr. Wood, we have given you one hour.

Mr. WOOD. I am quite through.

I have here schedules of foreign wages, which have been converted, and which I would like to have incorporated with my brief. And I also have some others giving the current quotations on the various kinds of woollens produced in the foreign countries, with comparative domestic quotations, and the cost of conversion, which is not quite ready, but will be due—

The CHAIRMAN. All right.

Mr. DICKINSON. May I ask a question?

The CHAIRMAN. Yes, sir.

Mr. DICKINSON. Are your mills buying any domestic wool?

Mr. WOOD. Are the woolen manufacturers?

Mr. DICKINSON. The mills you represent?

Mr. WOOD. I think within the last two weeks there have been some purchases.

Mr. DICKINSON. How about prior to that time?

Mr. WOOD. Prior to that time very little wool was purchased for many months.

Mr. DICKINSON. What was that due to?

Mr. WOOD. The mills being shut down, unable to get orders.

Mr. DICKINSON. Where have they been buying most of the wools you say they are buying now in the domestic field, but prior to that they were buying from the exporters?

Mr. WOOD. For the same period, there was about as little buying abroad as of domestic wools.

Mr. DICKINSON. Well, from what countries do you buy?

Mr. WOOD. The principal sources of supply are Australia, South America, and South Africa.

Mr. DICKINSON. And you are buying scoured wools, are you?

Mr. WOOD. Scoured wools are bought from some of those countries, but as to the details of that, I am not able to answer your question. In my own business we do not purchase raw wools, but buy yarns.

Mr. DICKINSON. I understand that you are not prepared to indicate to the committee what the rate of duty should be until you know what the rates are going to be upon wool, what wool rates are going to be?

Mr. WOOD. Yes, sir.

Mr. LONGWORTH. Colonel, what do you think of the proposition of changing the classification under the Payne law and putting the duty on the scoured wool without reference——

Mr. WOOD (interposing). I do not know whether you were in the room at the time I began, but I referred to that in my remarks. I covered that in my remarks.

Mr. LONGWORTH. I was not in the room.

Mr. WOOD. We do not recommend it. We say that should be determined by the committee. We think it will involve some very serious difficulties, and we think that it is going to prove a disappointment to the wool growers. We think that they will recognize that it will result in many complaints against the wool schedule. The duty on the scoured content of wools in the grease is sufficient to protect the finer grades, or, the higher grades, will be a very high ad valorem equivalent on the coarser grades of wool. If the rate is placed on the scoured wool content, and any particular rate which might be adopted is based upon that, it will result in there being a very high ad valorem on coarse wool.

That is the difficulty, as we see it, but as to whether the wool duty should be based upon the scoured wool content, and the method of application, we figure that that is a problem to be presented by the wool growers and should be judged by the committee without any reference to our opinion.

Mr. DICKINSON. Let me ask you a question——

Mr. LONGWORTH (interposing). Generally speaking, Colonel, would the rates in the Payne law, in your opinion, be an adequate duty?

Mr. WOOD. On the manufactured wools?

Mr. LONGWORTH. On the manufactured wools.

Mr. WOOD. At the present time, because of the exchange situation, they would not themselves be sufficient, but as I have mentioned in my statement, I feel that the exchange situation is a rather temporary one compared with the permanent disadvantage of the American manufacturers, and that provision for that exchange situation ought to be made entirely independent. In other words, if we are going to make a tariff law now that we hope will last many years, we have got to base it upon what we think the conditions are going to be when they become normal here and abroad. Probably, that exchange situation is one which should not enter into a protective tariff law. It deals with the international business, and, therefore, I think should be made a separate subject for legislation without regard to the tariff.

Mr. LONGWORTH. Let me ask you another question. Do you think it would be possible to base the valuation of wool on the market, wholesale prices in America?

Mr. WOOD. Entirely possible.

Mr. LONGWORTH. You think it would be administratively workable?

Mr. WOOD. I think it is entirely possible. I think it not difficult to determine the American values, and that it would be very much easier than for the customs official to verify the foreign values.

Mr. LONGWORTH. Would you base it on the wholesale prices?

Mr. WOOD. Yes; certainly the wholesale prices at the port of entry.

Mr. LONGWORTH. You think that the wholesale prices are uniform enough for the customs officials to arrive at a fair price? You think that our prices are uniform enough, and well known enough for the customs officials to find out fairly accurately what the values are, approximately, on any shipment?

Mr. WOOD. There are probably no greater difficulties in as-

certaining the values here in the industry, than abroad, on account of the daily fluctuation. The fluctuations here are probably no greater than they are abroad.

Mr. GARNER. Well, if you adopt the American standard of prices, why would you want an ad valorem duty, could it be administered equally as well as the specific duty?

Mr. WOOD. I think it could be administered, certainly, a great deal better than upon the foreign prices and with regard to a good many things, I do not see how anything else but an ad valorem duty could be applied.

Mr. GARNER. If you do adopt the American price, as the basis for levying the duty, then would an ad valorem be better in the wool schedule than a specific duty?

Mr. WOOD. For raw wool?

Mr. GARNER. For all wool.

Mr. WOOD. For raw wool I think a specific duty is preferable, and is practicable. For manufactures of wool while preferable, the specific form has not heretofore been considered practicable. If the rates on manufactures must be in ad valorem form the proposal for American valuations would be applicable to them.

Mr. GARNER. While the matter might be applied to the wool schedule, is it your opinion that it could be applied to all other industries in the United States?

Mr. WOOD. I am afraid that my experience has not been broad enough for me to answer that, but I should think that it would.

Mr. GARNER. Well, for instance, where the industry in this country is controlled by patents, they would be able to make the prices to suit themselves, would they not?

Mr. WOOD. Well, that is a complication that I have not given any consideration to, because it does not exist in the wool industry. We have no patents, and no monopolies.

Mr. DICKINSON. What countries are now your competitors in the wool industry, what countries are the competitors of the wool industry in this country?

Mr. WOOD. Manufacturers?

Mr. DICKINSON. Yes, sir.

Mr. WOOD. Great Britain, Germany, Belgium, Austria, Czechoslovakia are our principal competitors.

Mr. DICKINSON. Before the war?

Mr. WOOD. I have reference to the prewar period.

Mr. DICKINSON. Well, will the same conditions obtain now, or is Great Britain your principal competitor?

Mr. WOOD. No; there have been within the last four weeks a great many offers of German goods. I might say, as an



illustration of what it is possible for Germany to do: That a firm of Boston merchants sent a large consignment of wool from Boston to Germany to be combed into tops, and then brought back to the United States. The entire transportation costs, both water and rail, both ways, were paid, and the insurance and present duty which included duty on the value of the American owned wool shipped from here, of which the tops were made. And, yet, with all of these added expenses, the cost of conversion was less than it would have been, had the tops been made in Massachusetts, whence the wool was sent.

MR. DICKINSON. The American competitors before the war are the same competitors which you will have now?

MR. WOOD. Yes, sir.

MR. OLDFIELD. Colonel, suppose this 12½ per cent export duty stands as fixed by the reparation commission, what effect will that have on it?

MR. WOOD. So far as Germany is concerned, it would lessen the necessity for a tariff here to the extent of 12½ per cent on the very low foreign values. There is no doubt about that.

MR. OLDFIELD. There is just one question. There is some agitation in this country about stamping on wool the contents, to show how much wool is in the cloth and what the other substances are, what do you think about that?

MR. WOOD. I would like to answer that from my notes here, because I can answer it more fully, probably.

MR. OLDFIELD. I would like to have you answer that. That is with regard to the "truth-in-fabric law."

MR. WOOD. During the examination of other witnesses reference has been made to the so-called "truth-in-fabric bill." To discuss that subject thoroughly and present the exhibits necessary to a full understanding of the facts would require upwards of an hour, and as it does not directly pertain to the subject you are now considering I assume you would not be willing at this hearing to take so much time for that purpose. I shall, therefore, in reply to what has previously been told you upon the subject merely state the position of those whom I represent with regard to that matter. If, however, you desire the entire story now or at a future time I shall appreciate the opportunity to correct the misunderstandings that exist, and reply to the misrepresentations that have been made.

Wool manufacturers have for many years very actively advocated legislation to prevent misbranding and misrepresentation of any kind concerning the quality of textile products or of the materials of which they are composed. They believe the best form of law for this purpose would be one



patterned after the British merchandise marks act which was adopted by Great Britain more than 25 years ago, and which has been effective in operation. Several bills modeled upon that act have been presented to Congress at our instance, and we have appeared at public hearings of the appropriate committees to urge their passage.

With equal earnestness we have opposed the enactment of compulsory labeling bills masquerading under the title of "truth-in-fabric," because such laws will aid the unscrupulous in practicing upon the public such deception as they are designed to prevent. So impracticable is the method proposed that a mere presentation of the facts has always been convincing. The proposal was first made to Congress about 20 years ago by Representative Grosvenor on behalf of the association of wool men. When the real "truth-in-fabrics" was learned by those at whose request the bill had been presented, they very frankly concurred in the opinion that such a law would be worse than futile, and it was immediately abandoned.

In the last Congress Representative Barkley brought in a bill of the same kind, which was referred to a subcommittee of which he was chairman. As a result of the information obtained at public hearings, and from many briefs presented, the author of the bill was so convinced that compulsory labeling legislation would be opposed to the public interest that he abandoned his original bill, and presented in its stead one drafted on lines similar to the merchandise marks act.

Notwithstanding these and many other abandonments of such measures, the proposal is revised from time to time by others who think they have discovered a new method by which the market value of their products may be enhanced.

To the extent that it is possible to prevent the public from being deceived concerning the merits and the value of the articles they buy, that result can be best obtained by a law like the Barkley bill or the Rogers bill. It can not be by the method of the French and Capper bills.

Just before coming here I received some samples of raw material. They are offered with the assurance that they will comply with the proposed truth-in-fabric legislation, if it should be enacted. I will be very glad to turn them over to the committee for their examination, and they can judge with regard to materials of that kind.

Mr. HAWLEY. Do you anticipate any competition from Japan?

Mr. WOOD. There has been no appreciable competition in the wool manufacturing industry as yet, because the industry

in Japan has really only been started within a few years. It has been growing at a very great rate. They formerly obtained some of the primary manufactured product from Australia, but they are now manufacturing a great deal themselves.

I do not anticipate that there would be any competition from Japan within the next few years, but if they progress as rapidly as they have in other industries, there is no reason to doubt that eventually they will be a forceful factor in our industry.

Mr. GREEN. Would it be your belief that if the exchange situation should be straightened out, that the other matters would work out suitably—fairly?

Mr. WOOD. Yes, with properly protective tariff rates to offset the normal differences in costs.

Mr. GREEN. Could you make any suggestions?

Mr. WOOD. I am not yet prepared to make any suggestions.

Mr. LONGWORTH. If we put it on an American valuation, we would obtain that?

Mr. WOOD. That would go further than anything else. That I would suggest, personally.

Mr. LONGWORTH. It would do away with the wilful undervaluation?

Mr. WOOD. It would do away with the undervaluation and valuations which were undervalued because of the present exchange.

Mr. HULL. And it would do away with the importations from that particular country?

Mr. WOOD. I do not see why, Mr. Hull.

Mr. HULL. Well, take Germany's export duty. If we put it on a gold valuation, put our imports on a gold valuation from Germany, because of the depreciation of the mark, would it not prohibit the importation of everything?

Mr. WOOD. Oh, if you put it on a gold basis.

Mr. HULL. That is the proposition I understand.

Mr. WOOD. I am not prepared to go so far in the case. I think it would.

Mr. HULL. Mr. Wood, what proportion of our domestic wools are what are known as class 1?

Mr. WOOD. I can not answer you with exactness, but I should say possibly between 90 and 95 per cent.

Mr. HULL. Between 90 and 95 per cent?

Mr. WOOD. I would think so, sir.

Of the other class—of class 3, carpet wools—we produce practically none, except by accident, there may be some very low grade wool that may be placed in that class.

Of our class II wools there are only a few flocks in this country. I do not imagine that the entire quantity of class II wools would be 100,000 pounds. When I speak of class II wool I do not include mohair, but just wool. Mohair is not an English wool, but it has been classed as No. II.

Of class II wool, I would say, that not over 100,000 pounds are produced in this country.

Mr. HULL. Taking the rates on raw wool that are contained in the present emergency tariff bill now pending in the Senate, 15, 30, and 45 cents a pound, what rates on the different and various stages of manufacture would be necessary, in your judgment?

Mr. WOOD. As I have said here, Mr. Hull—I do not know whether you were in the room at the time I stated it—the ratios are those which the Tariff Board worked out which, according to their data, comes to one and one-tenth times the scoured wool duty for tops; for yarns, one and two-tenths times the scoured wool duty; and for cloths, one and one-half times the scoured wool duty.

Mr. HULL. That information is based upon the content of the scoured wool?

Mr. WOOD. Yes, sir.

Mr. DICKINSON. From what breed of sheep do you get the class II wool?

Mr. WOOD. They are the Lincoln and the Leicestershire. Those are the two principal breeds.

Mr. DICKINSON. From what section of the country?

Mr. WOOD. They are very large sheep, and the wool does not grow close to their body, but is long wool. It is an entirely different product.

Mr. DICKINSON. Is it confined to any particular section of the country?

Mr. WOOD. It is scarcely grown in this country at all. It is grown chiefly in England, and to some extent in Canada.

Mr. GREEN. Those figures which you have mentioned are those found by the Tariff Commission?

The CHAIRMAN. Mr. Wood, I want to ask just one question. We have kept you for a long time. You manufacture and use our local wools. No protection that Congress can give the wool grower will be of any benefit to him unless the woolen mills, which are the markets for his wool and which are the users of his wool, are given adequate protection?

Mr. WOOD. That is unquestionably true.

The CHAIRMAN. In other words, if Congress does not protect the woolen mills—the only market the wool grower in the United States has in the world—there will be no use in help-

ing or attempting to protect the wool grower, because he will have no market for his wool. There is no other market in the world for his wool. So that the two must be protected together?

Mr. WOOD. There is no question about that.

Mr. TREADWAY. The merino sheep furnishes wool which is classed No. 1, do they not?

Mr. WOOD. Yes, sir; that is what is classed as No. 1, the merino and all wools that have a trace of merino blood.

Mr. OLDFIELD. In the Payne law, you have protection on classes I, II, and III. They are all protected.

Mr. WOOD. Yes, sir; but we never produce class III.

Mr. OLDFIELD. If we can not produce them, if they do not compete with our wools, class II, or III, and you say that we have no No. III, and possibly 100,000 pounds of No. II, why should there be any protection on those two?

Mr. WOOD. For instance, with regard to the foreign grown wool, there are some class III wools, which are so near the dividing line between the merino-blood wools and the coarser wools that there are times when fashion will take very coarse wools, and sometimes those wools have been used in the manufacture of cloth.

Mr. OLDFIELD. Is there any dividing line, or any way of figuring out how much they will normally run? In other words, if these wools do not compete with the wool growers' flocks in this country, I do not think there is any necessity of prohibiting the importation of these wools into this country.

Mr. WOOD. There is not, except to the extent that it is possible that some of the finer sorts, the very finest of the coarse wools will compete. Some of the finer carpet wools will compete.

Mr. OLDFIELD. You are giving the wool grower of this country the benefit of the doubt?

Mr. WOOD. I think that they would be entitled to the benefit of the doubt.

Mr. OLDFIELD. Instead of the consumer of the country?

The CHAIRMAN. If that is all——

Mr. HULL (interposing). Just one question. If I understand you correctly, your contention is that the present time, and at an indefinite time in the future, the American wool manufacturers do not now expect to develop any export business, but only to supply the American market, on account of what you consider the cheaper cost of production in certain other countries?

Mr. WOOD. That is my own view entirely, Mr. Hull.

If we can ever export, produce wool for exportation, manufacture wool for exportation, obviously we would not need any protective tariff. The very fact that we point to the need of a protective tariff in this country is due to the disadvantage in competition in the neutral markets, which makes it impossible for us to export. There have been exports of wool, manufactured in this country, during the past few years. During the war period there was a considerable volume. The only reason was because those countries were cut off from their normal supply, from Great Britain and the Continent; and after those channels were reopened the export business here immediately dropped off.

Now, I might say that there are some manufacturers who have indulged the illusory hope that they would be able to build up a great export business, but it is wholly impossible.

Mr. HULL. The wool industry has had very adequate protection for some two generations, and do you have the hope that by efficiency and other methods of efficient production to get the level of cost and price down enough that you might do better than simply supply the home market?

Mr. WOOD. Mr. Hull, that raises the question of two theories of necessary protection; that is, the infant industry which is going to eventually grow into lusty manhood and not need protection, and the other theory which I recognize as applicable to the wool manufacturing industry—that is the difference in the cost of production here and abroad so long as you have a different standard of living and a different standard of wages.

Mr. HULL. Several people who come in here have told us that they wanted protection, and they say that if they can get it for a reasonable length of time that they will get the cost of production level down enough that they will not have to maintain an artificial cost level in this country as compared with other countries.

Mr. WOOD. Briefly, my answer to that is this: There are two ways in which we can eventually do that in the wool manufacture. One is by getting the cost of production in the foreign countries brought up to our level which is the desirable one, and the other is by lowering our cost of production here through lowering wages to the European standard. Those are the only two methods I can see.

Mr. HULL. Then, you do not hope to lower your cost by better skill and more efficiency and more efficient methods, but it would simply be a question of cutting down the per diem?

Mr. WOOD. The only way in which that can be done would



be by some revolutionary discoveries and machines which are not yet in sight. We have to-day the same machinery that they have in Europe.

Mr. HULL. In other words, we have reached our maximum of efficiency in production?

Mr. WOOD. Except through discovery of new machines. We have no better machines than Europe has.

The CHAIRMAN. We have heard the gentleman for an hour and twenty minutes. I think we will have to call another witness.

Mr. OLDFIELD. What part of your product, in the wool industry, can you produce as cheaply in this country as you can in the foreign countries?

Mr. WOOD. I know of nothing.

Mr. TILSON. There are no articles produced here as cheaply as they are produced abroad?

Mr. WOOD. No, sir.

Mr. TILSON. Not where the machinery is used instead of hand work? I thought that some gentleman said that where we used machinery, we could compete, but that we could not compete with hand work.

Mr. WOOD. Not in the wool manufacture—

Mr. LONGWORTH (interposing). That is true also of cotton.

Mr. WOOD. We have the same machinery that Great Britain has. A great deal of the machinery used in this country is made in Great Britain and some of it on the Continent. They have very much more continuity of employment over there in Europe in the textile industry. It is a more permanent vocation than it is in this country. Many men continue in the same vocations there that their fathers had before them.

Mr. OLDFIELD. What grade of goods do you have the most keen competition on, is the most keen competition on the high-grade or the low-grade goods?

Mr. WOOD. Under the conditions which prevailed before the war, and that is the only time that we can deal with, the chief competition was on the finest grade of goods. On the lower grades of goods, I presume that the disparity is less than on the finer grades.

Mr. OLDFIELD. Then, you would need less protection on the lower grade goods?

The CHAIRMAN. Mr. Wood, you may file in your brief anything which you think will be of benefit or help to the committee and we will be very glad to have you do that. We will have to call another witness now.

(The papers referred to follow:)



*Worsted tops—Price delivered in Boston.*

Quality.	Manufactured in United States; Boston market prices for United States grades equivalent to British grades named.	Manufactured in Great Britain; costs, freight, insurance, and present 8 per cent duty included.
40 .....	\$0.3750	\$0.3195
44 .....	.4000	.3378
46 .....	.4500	.3718
48 .....	.5000	.4241
50 .....	.6500	.4957
56 .....	.7500	.5825
58 .....	.8500	.6678
60 .....	.9500	.7754
64 .....	1.1000	.8958
70 .....	1.2000	.9536

*Comparison of wool-combing charges.*

[In cents per pound; German prices converted into United States currency equivalents at 1.37 cents per 1 mark.]

Grade.	American price.	German price.
Fine .....	17½	0.0433
High 3/8 .....	16½	.0416
Low 3/8 .....	14½	.0396
1/4 .....	11	.0376
Prepared .....	09½	...

*Comparison of wool-sorting charges.*

Grade.	[Cents per 100 pounds.]	
	American.	German.
Fine territorial .....	87	10
Fine domestic .....	105	10
1/4 and 3/8 .....	101	10
Fine Australian .....	75	10

*Comparison of worsted yarns.*

Size.	Yarn made in United States; market prices, Boston.	Prices quoted from Belgium Jan. 20, 1921; freight, insurance, and present United States duty added. Per lb., U. S. currency.
2/40 warp .....	\$1.86	\$1.30
2/36 hosiery .....	1.93	1.416
2/46 hosiery .....	2.06	1.534
2/50 warp .....	2.12	1.711
2/57 .....	2.27	1.83
2/60 .....	2.34	1.888
2/70 .....	2.75	1.947

*Comparison of spinning costs.*

[In cents per pound; German costs converted into United States currency equivalents at 1.3 cents per 1 mark.]

Size of yarn.	United States.	German.
2/30 .....	44	.089
2/40 .....	54	.118
2/50 .....	67	.147
2/60 .....	88	.174
2/70 .....	114	.21

[The Manufacturer, Philadelphia, February, 1921.]

## GERMAN TEXTILE WAGES.

A new wage agreement for the textile industry of the "District of the right bank of the Rhine," dated October 1, 1920, was made operative to December 31, 1920, and the basic rates continue in effect automatically for one year unless notice of termination is given six weeks prior to its expiration. The H. C. L. rates were effective up to November 30, 1920.

By this agreement a basic scale of minimum wages for time work is adopted, to which specified additions are made on account of "high cost of living."

Provision is made for family allowances, and under certain conditions the basic rates may be reduced if it is proved that workers do not come up to the average standard.

The basic rates, plus the cost of living addition, for a 48-hour week, converted into United States currency at the current rate of exchange (1 mark=\$0.013) are stated hereunder:

## MALE—PER WEEK OF 48 HOURS.

Age.	Basic.	H. C. L.	Total.	Con- verted into United States money.
	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	
14 .....	77.87	28.80	106.67	\$1.39
15 .....	87.60	28.80	116.40	1.51
16 .....	102.20	38.40	140.60	1.83
17 .....	116.80	38.40	155.20	2.02
18 .....	136.27	45.60	181.87	2.36
19 .....	150.87	45.60	196.47	2.55
20 and over .....	<sup>1</sup> 194.67	52.40	257.07	3.34

<sup>1</sup>Male workers 20 years and older, who receive more than (192 marks per 48 hours) \$2.50, whether time or piece workers, are allowed (55.20 marks) \$0.72 per 48 hours for the H. C. L. addition.

## FEMALE—PER WEEK OF 48 HOURS.

Age.	Basic.	H. C. L.	Total.	Con- verted into United States money.
	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	
14 .....	68.13	24.00	92.13	\$1.20
15 .....	77.87	24.00	101.87	1.32
16 .....	87.60	28.80	116.40	1.51
17 .....	97.33	28.80	126.13	1.64
18 .....	107.07	36.00	143.07	1.86
19 .....	116.80	36.00	152.80	1.99
20 and over .....	146.00	43.20	189.20	2.47

Family allowance in addition to the above is 5 marks (\$0.065) per week for husband or wife who does not work, and for each child less than 14 years of age. If the weekly time work is less than 33 hours this family allowance is increased from 5 to 10 marks (\$0.065 to \$0.13) per week.

The towns are classified in four classes, for three of which classes the basic rates are reduced by 20 pfennigs (\$0.0026), 30 pfennigs (\$0.0039), and 40 pfennigs (\$0.0052), respectively.

Piecework rates are, as a rule, to be fixed so that the worker of average ability can earn up to 15 per cent more than the fixed wages by time work, not including the family allowance.

Piecework rates are the same for male and female workers, generally.

All craftsmen, firemen, machinists, drivers, truckmen receive 15 to 25 per cent more than the basic wages, but the percentage is not computed on the additions. Where there are special tariffs for these trades the majority of a craft in each factory shall determine whether the textile or the craft schedule shall be applicable, and the decision is binding.

Assistant foremen, male or female, receive at least 15 per cent. and independent foremen 25 per cent more than the time wages of the branch groups under their supervision. These wages (foremen and assistant foremen) are paid as weekly or monthly earnings on the basis of a weekly working period of 46 hours.

*Wages, from the age of 20 years and upward, per week of 48 hours.*

#### WOOL YARN SPINNING.<sup>1</sup>

[Rate of exchange, 1 mark = \$0.013 United States money.]

	Basic wages, in marks.	H. C. L., in marks.	Total, in marks.	Con- verted into United States money.
Sorting room, sorters, female .....	146.00-155.70	43.20	189.20	\$2.46
Scouring room, scourers, extractors, driers:		43.20	198.90	2.59
Carbonizers, men .....	223.80	62.40	286.20	3.72
Helpers, men .....	209.20	62.40	271.60	3.53
Carbonizing:				
First carbonizers, men .....	233.60	62.40	296.00	3.85
Second carbonizers, men .....	219.00	62.40	281.40	3.66
Picking:				
Picking and duster workers, women	150.80	43.20	194.00	2.52
Dyehouse:				
Machine dryers, men .....	223.80	62.40	286.00	3.72
Other dyehouse workers, men ....	209.20	62.40	271.60	3.53
Willowing:				
Willowers and oilers, male .....	214.10	62.40	276.50	3.59
Willowers and oilers, female .....	150.80	43.20	194.00	2.52
Card strippers, male .....	209.20	62.40	271.60	3.53
Carders, female .....	160.60	43.20	203.80	2.65
Carders, piece work basis .....	160.60	43.20	203.80	2.65
Spinning (the conception of the male spinner requires the operating of 2 mules):				
Spinners, male, time work .....	209.20-223.80	62.40	271.60	3.53
Head piecers, female, time .....	155.70	62.40	286.20	3.72
Second piecers, female, time .....	150.80	43.20	198.90	2.59
Reserve girls .....	146.00	43.20	189.20	2.46
Piece work basis .....	150.80	43.20	194.00	2.52
Twisting:				
Machine girls .....	155.70	43.20	198.90	2.59
First twisters, female .....	155.70	43.20	198.90	2.59
Second twisters, female .....	150.80	43.20	194.00	2.52
Reserve girls .....	146.00	43.20	189.20	2.46
Piece-work basis .....	150.80	43.20	194.00	2.52

<sup>1</sup> The work done in the spinning, twisting, reeling, carding, spooling, and picking departments is to be considered piecework. If the employer refuses to let these groups do piecework, the wages are to be raised 15 per cent. If the workers refuse, the increase is not to be paid.

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Wages, from the age of 20 years and upward, per week of 48 hours—Cont'd.

WORSTED YARN SPINNING.<sup>2</sup>

	Basic wages, in marks.	H. C. L., in marks.	Total, in marks.	Converted into United States money.
Female wool sorters:				
Time work .....	146.00-156.00	43.20	189.20	\$2.46
Basis for piece work .....	150.80	43.20	194.00	2.52
Scourers .....	223.80	62.40	286.20	3.72
Scourers' helpers .....	209.20	62.40	271.60	3.53
Card strippers, male .....	209.20-223.80	62.40	271.60	3.53
Card strippers, female .....	150.80	62.40	286.20	3.72
Combers, female .....	146.00-155.70	43.20	194.00	2.52
Back washers, female .....	150.80-155.70	43.20	198.90	2.59
Machine driers .....	233.60	62.40	286.20	3.72
Other dye-house help .....	209.20	62.40	271.60	3.53
Vigoureaux printers, female .....	150.80-155.70	43.20	194.00	2.52
Gill-box tenders, female .....	146.00-155.70	43.20	198.90	2.59
Drawing-room workers, female, time work .....	146.00-155.70	43.20	189.20	2.46
Drawing-room workers, female, piece- work basis .....	150.80	43.20	194.00	2.52
Spinning room:				
Spinners, male .....	214.10	62.40	276.50	3.59
First feeders, female .....	146.00	43.20	189.20	2.46
Second feeders, female .....	150.80	43.20	194.00	2.52
Creelers and reserve .....	146.00	43.20	189.20	2.46
Ring spinning and twisting:				
Machine girls and first piecers, female .....	155.70	43.20	198.90	2.59
Second piecers, female .....	150.80	43.20	194.00	2.52
Reserve girls .....	146.00	43.20	189.20	2.46
Inspectors, female .....	155.70	43.20	198.90	2.59
Basis for piece work .....	150.80	43.20	194.00	2.52

<sup>2</sup> Work done in the sorting, drawing, spinning, twisting, spooling, and reeling departments is to be considered as piece work. If the employer refuses to permit these groups to do piece work, the wage rates are to be increased 15 per cent. If the workers refuse, the increase is not to be paid.

## BROAD WEAVING—SILK, COTTON, HALF WOOL, AND WOOLEN CLOTH FOR LINING.

	Basic wages, in marks.	H. C. L., in marks.	Total, in marks.	Converted into United States money.
Weavers, <sup>3</sup> piecework basis: <sup>5</sup>				
Male .....	141.10	55.20	196.30	\$2.55
Female .....	141.10	43.20	184.30	2.39
Card punchers, designers, inspectors, harness makers, independent fancy weavers, drawers-in, necktie weavers, reed makers, sizers, beamers, and polishers: <sup>4</sup>				
Time work .....	209.20	62.40	271.60	3.52
Piecework basis .....	204.40	55.20	259.60	3.37
Speckers .....	150.80	43.20	194.00	2.52

<sup>3</sup> Jacquard looms or box looms with more than two shuttles, an increase of at least 5 per cent.

<sup>4</sup> Male and female weavers, warpers, spoolers, twisters, and piecers are to be considered as pieceworkers. If the employer does not allow these groups to do piecework and the workers are willing to do so, then the time wage is to be increased 15 per cent.

<sup>5</sup> For 2-loom weaving the piecework rate is to be fixed so that the worker can earn 15 per cent more than the basic timework rate.

For operating one more loom than normal (see previous paragraph) the increase to the piecework rate is 30 per cent.

For operating more than three looms (automatic looms) the increase to the piecework rate is 40 per cent.

*Wages, from the age of 20 years and upward, per week of 48 hours—*  
Continued.

	Basic wages, in marks.	H. C. L., in marks.	Total, in marks.	Con- verted into United States- money.
On smooth one-colored goods of twisted warp up to 8 dobbies .....	° 209.20	° 55.20	° 264.40	° \$3.44
Warpers, sizers, drawers-in, piecers, twisters, card punchers, designers, in- spectors, reed makers, harness mak- ers, and fancy weavers:				
Time work .....	219.00	62.40	281.40	3.66
Piece work basis .....	209.20	55.20	264.40	3.44
Female weavers and warpers: <sup>7</sup> 20 years of age and over .....	155.70	43.20	198.90	2.59
Female speckers .....	150.80	43.20	194.00	2.52
Minders, 20 years and over .....	160.60	43.20	203.80	2.65
Finishing: Shearers, nappers, deca- tizers, press-tenders, fullers, extrac- tor tenders, workers in cloth stock room .....	223.80	62.40	286.20	3.72

<sup>6</sup> This rate is subject to the following additions for:

	Pfennig.
Single warp .....	5
Multicolored warp .....	5
Yarn coarser than 10 metric .....	5
Yarn coarser than 6 metric .....	10
9 to 16 dobbies .....	5
17 to 24 dobbies .....	10
More than 24 dobbies .....	15
Drafting .....	5
Selvedge dobbies included in computing the number triple change of pick with 1 colored weft .....	5
Multicolored weft .....	10
More than triple change of picks instead of 5 pfennig .....	15
More than 1 warp brain .....	5
5,000 to 10,000 warp threads .....	5
More than 10,000 warp threads .....	10
Weavers, warpers, and drawers-in to be considered piece workers.	

<sup>7</sup> Female weavers, warpers, spoolers, twisters, burlers and minders are to be considered piece workers. If the employer refuses to let this group do piece work the time wage is to be increased 15 per cent. If the female workers refuse to do piece work they can only claim the time wage.

We are also able to present herewith the wages (converted into terms of United States currency at the rate of exchange stated in the footnotes following the tables) of certain employees in the woolen industry of Belgium and Austria, as follows:

	Belgium.	Per week.
Wool sorting:		
Overseer, woman .....		\$5.50
Porter, woman .....		4.67
Speeder .....		6.23
Sorter—		
Over 18 years .....		4.03
Under 18 years, with 2 years' experience .....		3.73
Under 18 years, without experience .....		3.12
Apprentices—		
Till 6 months .....		2.51
From 6 to 12 months <sup>1</sup> .....		3.91
Young men—		
From 14 to 15 years .....		3.12
From 15 to 17 years .....		3.91
After 17 years get adult wages.		

<sup>1</sup> After a year they get the sorter's wages.

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Wages, from the age of 20 years and upward, per week of 48 hours—  
Continued.

## Belgium—Continued.

	Per week, time work.		Per week, piece- work, average.	
	Francs.	United States currency.	Francs.	United States currency.
Carbonizing:				
Acidifier (who prepares the acid), and carbonizer (who hangs the wool to dry after carbonizing) . . . . .	102.00	\$6.23	115.00	\$7.03
Beater (who makes the bales of greasy wool) . . . . .	102.00	6.23	110.00	6.72
			Weekly wages.	United
			In francs.	States
				currency.
Wool scouring:				
Sorter (woman), time work . . . . .			76.50	\$4.67
Sorter (woman), piece work average . . . . .			90	5.50
Scourer, inside porter (who takes acid out of wool after scouring), beater, cooler (who stretches wool to cool it), soap preparer, dryer, rinses . . . .			90	5.50
Worsted combing and spinning:				
Mule spinning, slow speed . . . . .			148.75	9.09
Mule spinning, usual speed . . . . .			152.35	9.30
Mule speed . . . . .			156.20	9.54
Twisting . . . . .			156.20	9.54
Frame spinning—				
Spinner . . . . .			96	5.86
Piecer . . . . .			82	5.01
Adjuster (96 x .9) . . . . .			86.70	5.30
Doffer (96 x .43 x 3.6 francs) . . . . .			44.90	2.74
Assembler (woman) . . . . .			74	4.52
Mender of broken cops . . . . .			74	4.52
Reeler or warper . . . . .			96	5.86
Packer of cops in cases . . . . .			80	4.89
General day work (women) . . . . .			73.95	4.52
Porter (laborer) . . . . .			90	5.50
Card cleaner . . . . .			130	7.94
Waste sorter . . . . .			73.95	4.52

The foregoing tables have been computed upon the actual Belgian rates in francs, converted at the current rate of exchange, viz., 1 franc = \$0.0611.

Hours per week after June, 1920, 48. No difference in hours for women or minors. No overtime work at present (40 hours). Night workers work 5 nights of 8 hours (40 hours), for which they receive the same pay as day workers have for 6 days (48 hours). Adult women are permitted to work on the night turn. Until Dec. 31, 1920, apprentices allowed up to 10 per cent.

## Austria.

	In krone <sup>1</sup> per hour.	Equivalent in United States currency.	
		Hour.	week (48 hours).
Woolen manufacture:			
Spinners . . . . .	7.14	\$0.0157	\$0.754
Skilled workmen . . . . .	6.30-7.32	.0138- .0161	0.662- .772
Assistants, men . . . . .	5.10	.0112	.538
Assistants, women . . . . .	3.90	.0085	.408

<sup>1</sup> Exchange value of present currency (National City Co., Dec. 20, 1920): 1 krone = about \$0.0022.

Normal parity of gold coins: 1 krone = \$0.2026.



## THE FIFTY-SIXTH ANNUAL CONVENTION OF THE NATIONAL WOOL GROWERS' ASSOCIATION.

THE fifty-sixth annual convention of the National Wool Growers' Association was held in Salt Lake City, January 16-19, 1921.

Governor Charles R. Mabey, at one time a sheepherder, delivered the address of welcome. After Senator C. H. Williams of Deer Lodge, Montana, responded to the address, Frank J. Hagenbarth, for seven years president of the Association, delivered his annual address, in which he said in part:

\* \* \* The wool growing industry has not only suffered, in common with all other industries, through the general deflation and after-war conditions, but has been visited by physical conditions, which we can aptly describe as "an act of God." Beginning with the spring of 1918, when the great West was visited with the coldest storms of a generation, followed during the winter of 1918 and the summer of 1919 with such a drouth as the great Northwest has never seen, and again followed, beginning in October, 1919, with the snowfall in October over the Western ranges of from one to two feet, according to locality, there seems to have been a continuous visitation of the elements, conspiring to wreak vengeance on the flocks and herds of the great plains regions. The winter, which began in October, continued in all its rigor into the following May.

### HIGH FEEDING EXPENSES AND LOW PRICES.

The flockmaster was compelled to feed from six to seven months, at an enormous cost—600 to 700 per cent over normal. Where the extreme feeding period in the West would average not to exceed ninety days, the actual feeding period, during the winter of 1919 and 1920, was over six months. Nor was that all. The feed crop, owing to the drouth of the preceding summer, was only about half normal, which resulted in price raising from an average in prior years of around \$5 per ton for hay to over \$20 per ton; cottonseed meal was shipped into the ranges at a cost of \$100 per ton and corn at \$90 per ton. The flockmaster had to take his choice of either losing his flocks or borrowing enough money to feed through these long months at these excessive costs, the net result of the whole proceeding

being that in the spring of 1920 every flockmaster in the intermountain territory came out of the winter with either tremendous losses in livestock or heavy mortgage indebtedness.

Bankers and loan companies, which had furnished money for the payment of these extraordinary feed bills, were promised that when the wool clip of 1920 was marketed and the lamb crop sold, ample funds would be available to at least partially liquidate this heavy indebtedness. When the wool was shorn and ready for sale, there was no market; nor has there been any since. Owing to the extremely hard and long winter and the very late and cold spring, there was only about half the normal lamb crop. Every hope of the flockmaster was centered on the highest prices ever known for these lambs, but in the meantime, owing to the joint influence of the low values of by-products from slaughtered sheep, especially wool, and to the fact that tremendous importations of foreign lambs had come into the country, beginning in April and attaining large volume during the summer, when the marketing period for lambs had arrived, we not only had a half lamb crop, but half a price. This was the last straw.

#### RELIEF SOUGHT AT WASHINGTON.

The attention of the Government was time and again called to the condition of affairs. Petition after petition asking for an embargo against foreign meat and wool imports was sent by livestock organizations, by banking organizations, and by commercial organizations to the President and to other responsible members of the Government at Washington. To all of these appeals a deaf ear was turned. As a result we have today a two years' supply of wool on hand and over 2,000,000 carcasses of lamb in cold storage with additional quantities en route.

The disastrous situation described naturally resolved itself into a banking problem. Your president, at a meeting called in Chicago during the summer months, was chosen as chairman and to head a committee to go to Washington for the purpose of seeking relief. All the facts above recited were laid before the Federal Reserve Board and relief asked for. The President and the War Trade Board were asked under their war powers, which to this day have not been revoked by Congress, to declare an embargo on further imports of foreign meats and wools in order to stabilize our home markets and to preserve the banking situation. No result was accomplished. W. P. G. Harding, Governor of the Federal Reserve Board in Washington, assured your committee that every effort would be made to advise district Federal Reserve Banks that livestock paper, when presented by member banks, should receive the utmost consideration under the most favored terms.

## BANKERS HELPED THE INDUSTRY.

A spirit of fairness must compel the acknowledgment that not only the Federal Reserve Banks, but the member banks, as a rule, although there have been some notable exceptions, have stood nobly by the industry. They have assumed obligations of livestock men far beyond customary banking limits. Hereafter when a livestock man hears the redeye proponents of antibanking views discharge their tirades, let him always remember that his best and only friend during the past and present emergency has been his banker.

Although Washington officials may have acted hastily and unadvisedly at the beginning, the subsequent handling of our financial operations have saved the situation and have, in a large measure, made amends for any prior mistakes. The Federal Reserve Banking System and the strong position of its member banks, their willingness to extend credit and aid has saved this country from the greatest panic in all of its history.

Following the failure of your president and other officers to obtain relief for the industry through an embargo or other means, it became apparent that unless some action was taken to stabilize credit conditions for livestock many of our banks and livestock loan companies, especially in the great West, were headed for certain bankruptcy. This was not because fundamental and eventual conditions underlying such a producing industry as ours were not sound, but was rather owing to a temporary exigency which had arisen and which demanded prompt relief. With this thought in view your president, together with M. K. Parsons, Vice-President of the American Livestock Association, made a trip through the great financial centers of the East and interested the big banks and bankers of Chicago, New York, and Boston in the project of forming a financial pool for the purpose of rediscounting the paper of banks and loan companies which had become overburdened and distressed, and in order to prevent the shipment of our breeding herds of both ewes and cows to market for purposes of liquidation. Thirty-two different banks participated in this pool to the extent of over \$23,000,000.

I want to go on record now and here on behalf of the big banks of this country as saying that no better or stronger evidence has ever been given of sterling American patriotism and good citizenship than was evidenced in the formation of the Livestock Finance Corporation. While the Government failed to act, these banks acted, although already overloaded with burdens of every kind from every direction. These bankers were willing to assume the further burden of protecting you and your interests as I have described and this magnanimous act on their part must never be forgotten by us.

## AN EMBARGO SOUGHT.

As a further step toward stabilizing market conditions and restoring confidence in our industry, your president took it upon himself to name a committee to proceed to Washington with a view of, at the reconvening of Congress, having an embargo declared on the further imports of wool, mutton, and lamb and other meats. Your President, S. W. McClure and W. C. Coffey, acting on behalf of this organization; Dr. J. M. Wilson, President of the Wyoming Wool Growers; Prager Miller, President of the Arizona Wool Growers; H. C. Thurmond, Secretary of the Texas Wool Growers; F. R. Walker, President of the Ohio Wool Growers, and J. H. Fawcett of the American Farm Bureau Federation, constituted a committee which appeared before the various committees in Washington and presented your case to such good purpose that early in this session the Ways and Means Committee introduced and passed a bill through the House by more than a two-thirds majority, placing a duty of 15 cents per pound on wool and 21½ cents per pound on imports of foreign lamb and mutton. This bill is now pending in the Senate and if it is not talked or amended to death by politicians, it should pass the Senate within a few days.

The framers and friends of this bill realized that it is not a scientific arrangement, but as its name implies, is simply an emergency measure. Every student of tariff legislation knows that between the time of the enactment of a tariff act and its first proposal this country has invariably been flooded with foreign goods to such an extent as to nullify from one to three years any effect of the tariff bill which is eventually enacted.

## THE EXPECTED TARIFF LAW.

Beginning some time in March, the friends of American industry will set about the task of writing a new tariff under the most complex conditions that have ever faced them. Foreign labor conditions, the low rate for foreign exchange, and the general upheaval of the world's commerce present problems of a new and entirely unknown character. However, we have abiding confidence that the good business sense of the American people will meet the issue as well as it can be met. We have apparently been given a safe, sound, and sincere leadership. Congress has already set about the hearings on various schedules and by mid-summer a new tariff should be well under way.

The old idea of the tariff as a strictly political question has, we believe, for all time been laid on the shelf. The rank and file of the Democratic party, on the one hand, have

learned that America comes first and theory second; and on the other hand, the extremely high protectionists have learned that a tariff must be written to protect and not rob the public. The majority of Democrats today are followers of Oscar Underwood, a disciple of Samuel Randall, rather than of Simmons, the apt pupil of William J. Bryan. The Republican lineup will not be in the form of an Aldrich policy, but rather a fellowship with the principles of McKinley. Utah and the West is peculiarly fortunate in having returned to the United States Senate Senior Senator Reed Smoot. The new tariff will in nearly every schedule show evidence of his deep research and hard labor. Not only Utah should be happy in his presence on the Finance Committee, but the whole country is to be congratulated. In our opinion, Senator Smoot is one of the greatest, most fearless men that ever sat in the United States Senate.

#### AN AGRICULTURAL POLICY SHOULD BE ADOPTED.

It is to be hoped that the present Congress will, after a century of neglect, see fit to inaugurate and lay foundations for carrying out an agricultural policy befitting the United States. To date our entire agricultural and livestock program has been a haphazard affair, and that it has not resulted disastrously to our economic life is due only to our apparently unlimited natural riches and resources. As a whole the United States production of wheat and meat per acre used for such purposes is less than that of any other section of the world. The natural resources of the great West have been well nigh ruined by reason of the lack of moral courage of our western senators or by reason of the fact that they have not been awake to the true situation.

Our lands have not been classified; we have allowed homesteaders and their families to starve on lands never intended for farming, but made by the Creator for livestock; we have developed large reclamation projects and invited homesteaders to produce large crops of hay and other feed and then have deliberately set about to destroy the livestock which was their natural market; we have invited them to grow grain and other crops and have made freight rates so high as to virtually place an embargo against going to market; we have invited the farmer of the Middle West to feed millions of bushels of corn to livestock and have then dumped the competing meats of the world upon him; we have placed practically every article produced by agriculture upon the free list and have compelled him to pay a tax on everything he uses.

The history of agriculture has demonstrated that the de-



crease in the production of livestock is coincident with the decline of fertility. The very foundation of all other successful national endeavors, as has been demonstrated by the economic history of other countries, notably Germany, is being based on an expanding and prosperous agricultural policy. The real secret of Germany's economic strength was based on the fact that for several decades preceding her recent outbreak, she had developed and followed an intensive agrarian policy. There is no one munition more necessary in time of war than an adequate supply of wool. The late war demonstrated this truth conclusively. Critics of a proper protection, which would place the industry of wool growing on all fours with the rest of the world, have often called attention to the fact that at various periods in our history we have had protective tariffs and that the development and growth of the wool growing industry was not consistently developed thereby. The miracle is, to my mind, that under our "on again off again" tariff and agricultural policy we have any wool growing industry at all in this country. It is a well known fact that wool growing has, for a generation or more past, been driven from the intensive farming areas of the United States to the far West where it could only survive by reason of the unusual facilities in the way of cheap grazing and other advantages which the West at one time afforded.

#### THE INDUSTRY MUST BE DEVELOPED.

These days, however, have now passed and this Government and Congress must awaken to the fact that a proper agricultural policy demands that every proper and consistent means of developing this most essential industry should be adopted.

Especially speaking on behalf of the great Rocky Mountain and plains regions, which are essentially pastoral in character and the citizenship of which depends at this time largely, if not entirely, on its three resources of livestock, mining, and farming, we must of necessity perceive that any national policy which does not properly foster and develop livestock and mining means the economic downfall of this great territory. It will be fifty years or more before the intermountain region will be able to develop such a diversity of interests as will make it self-supporting. In the meantime, our pastoral and mining interests must remain our chief dependence for the development of a contented and prosperous citizenship.

#### EXCESSIVE WASTE IN DISTRIBUTION.

One of the greatest unsolved problems facing the United States today is the tremendous waste and increase of costs



which come between the producer and consumer. Our distributive system, either by reason of extravagance or profiteering, is entirely wrong. To illustrate, since 1919 the wholesale prices to the producers of meat have decreased about 50 per cent, and in the meantime retail prices to the consumer have actually increased. It would appear that there is fruitful avenue here for constructive action on the part of municipal, state, and even the national Government to eliminate a great portion of this cost and waste to the American people.

Various methods have been proposed, some of which we will consider at this convention. We believe the time has arrived when the movement for co-operative marketing and financing must be largely developed.

Your president has appointed a committee with Dr. Bettis as chairman, which will have certain recommendations to make to you along this line. These problems have been solved to a considerable degree in Europe and there is no reason why they cannot be solved here. \* \* \*

In my opinion, one of the severest blows that was dealt to at least a proper and reasonable cost of distribution for retail meats was given when Attorney General Palmer and the packers entered into an agreement which forever prohibits the packers from going into the retail business. On the contrary, in my judgment, that decree should have provided that the packers, in every city for each 10,000 of population, should maintain a retail market and distribute meats at proper costs to the public. These costs and profits would of necessity have come within the range of government regulation under such a court decree and a proper standard or criterion for distributive costs would have been thus set up which would serve the consumers' interests far better than the present system, or rather lack of system.

I cannot forego this opportunity of stating my own personal opinion that the prosecution of the packers has gone about far enough. I believe that the continual agitation of this subject has reached a point where it is reacting on the producers. The public has been falsely led to believe, every fact to the contrary notwithstanding, that the packers are profiteers, and the consumption of meat, therefore, has been greatly curtailed and any curtailment in the consumption of meat inevitably hurts the producer. Our policy in regard to the packers to my mind, has been highly destructive and not constructive, in any sense, up to date. I hope to see this convention thoroughly discuss this question and go on record as against certain present pending legislation in Congress. \* \* \*

After the election of officers which resulted in the election for the eighth time of Frank J. Hagenbarth as President;

Professor W. C. Coffey, of Illinois, as Eastern vice-president; and Fred Ellenwood, of California, and Hugh Campbell, of Arizona, as Western vice-presidents, F. W. Marshall was elected Secretary by the Executive Committee.

Among the many resolutions adopted were the following:

#### INDORSING FORDNEY BILL.

Whereas, due to the enormous importations of wool, frozen lamb, and other agricultural products, our domestic markets are thoroughly demoralized; and,

Whereas, due to the difference in exchange, we are paying foreign countries a bonus to dump their surplus products into this country, thus threatening the destruction of our whole business structure; therefore, be it

Resolved, That we, the National Wool Growers' Association, assembled this 19th day of January, 1921, respectfully urge every member of Congress, in the interest of the general public, to lay aside all party prejudice and support the Fordney emergency tariff bill now before Congress.

#### WOOL TARIFF.

Whereas, time has proven the necessity of self-support by any nation that continues to exist and prosper, and that such self-sustenance is dependent upon the production of food and clothes, and it is therefore necessary that agriculture and livestock, which are the bases of such production, must be assured of a stable and profitable position in national economic industry and must be protected against foreign competition furnished by distant countries favored by natural conditions and lower standards of living; and,

Whereas, it has been clearly demonstrated that in the process of distribution and manufacturing, the cost of the basic material comprises a very small proportion of the total ultimate cost to the consumer, as, *e. g.*, the price of the wool in a suit of clothes is a fractional percentage of the cost of those clothes to the wearer, or the price of lamb on the hoof has small relation to the cost of the meat on the consumer's table; and,

Whereas, import duties levied upon wool and mutton will serve a double purpose of supplying revenue to the Government and equalizing foreign competition to the welfare of the home producer by preserving to the latter his own market; therefore, be it

Resolved, That the National Wool Growers' Association asks the incoming Congress to recognize the importance and necessity of American wool and mutton production by imposing such import duties as will place the American sheep raiser in

a position of equality with any competition and thereby encourage the maintenance and development of this essential industry, and we urge and affirm that such duties should be specific and based on the clean content or scoured basis; and be it further

Resolved, That recognizing that American manufacturing of wool is a co-ordinate branch of our industry and is the only available market for American grown wools, we therefore urge that adequate compensatory and protective duties be levied upon imports of goods manufactured from wool.

#### MUTTON IMPORTS.

Whereas, the importation into the United States during the past year of approximately 3,000,000 carcasses of frozen lamb has resulted in such ruinous prices to the lamb market in this country as to threaten the virtual extinction of the industry; and,

Whereas, this imported lamb is produced under such climatic and labor conditions as to make competition in this country impossible; therefore, be it

Resolved, That we favor an import duty of not less than 5 cents per pound on such imported lamb, and that it is our best judgment that 10 cents per pound duty is not an unreasonable figure for adequate protection to the producers of mutton and lamb.

#### PACKER LEGISLATION.

Whereas, the constant agitation against the packers has had the effect of depreciating the value of livestock and unsettling the livestock market of the country, to the detriment of both the producer and the consumer; and,

Whereas, excessive prices by retail butchers throughout the country have seriously handicapped all efforts to secure an increased consumption of lamb, thus injuring the public by an unreasonable price, which prevents the use of our product and also ruining the market; therefore, be it

Resolved, That we favor the retail distribution of meats by the packers, in order that profiteering and unbusinesslike methods may be eliminated and the public be served at a reasonable price.

#### LABELING IMPORTED PRODUCTS.

Whereas, large quantities of lamb and beef of inferior quality, some of which is frozen, cured or prepared, and have been in storage for unduly long periods, are now being imported into this country from Australia and South America,

and are being sold as domestic products, thereby destroying the reputation of home-grown products; therefore, be it

Resolved, That we most earnestly petition the state legislatures to pass bills requiring each and every store, both wholesale and retail, that handles any imported meats, to display a large sign in a conspicuous place in such store, setting forth the fact that imported meats are sold in such establishment; and, further, be it

Resolved, That we petition the Congress of the United States to pass laws requiring all such imported articles to be clearly branded, showing the country of origin.

#### TRUTH IN FABRICS BILL.

Resolved, That we believe in the honest labeling of all products; that we deplore the use of shoddy in the manufacture and sale of so-called all-wool goods under the term "all wool," which term is construed by the public to mean "virgin wool"; that we consider the French-Capper bill, now pending in Congress, the best effort yet attempted to correct such fraudulent practices, and that this convention indorse the French-Capper bill and urge its members to aid and assist in its passage, and instruct its legislative committee to use all means within its power to secure the enactment of this bill into law, and further urges the *National Wool Grower* to use its columns for the same purpose.

#### FACTS ON CLOTHING.

Whereas, general statements have been made that the extremely high cost of clothing during the past has been largely due to the high cost of raw wool; and,

Whereas, figures for the past several years show that the cost of wool in the average suit of clothes is but approximately 10 per cent of the final cost to the consumer; now, therefore, be it

Resolved, That the National Wool Growers' Association and the affiliated state associations use every means to inform the buying public that the prices paid to the wool grower for wool in the grease have not been the principal factor in determining the retail cost of clothing; and be it further

Resolved, That the United States Department of Agriculture be asked to prepare and broadly distribute a comprehensive circular that will set forth the difference between goods containing shoddy and goods manufactured of all virgin wool, and giving a comprehensive method of determining the difference.

## MONTANA PLAN INDORSED.

Whereas, all wool growers are suffering severe financial reverses and embarrassment and many are actually facing bankruptcy because of their inability to sell their wool clip for 1920; and,

Whereas, the public has quit buying clothing largely because of the extremely high prices charged and the very unsatisfactory quality of goods carrying a high percentage of shoddy during the past three years; therefore, be it

Resolved, That the National Wool Growers' Association indorse the pioneering work of the Montana Wool Growers' Association in manufacturing and offering to the public all virgin American wool fabrics that will restore confidence in the trade and at a price that is fair to the purchaser; and be it further

Resolved, That the National Association and affiliated state associations lend their influence and support to this work in every possible way.

## CO-OPERATION FAVORED.

Whereas, every industry with which the wool grower deals in conducting his business is thoroughly organized for its individual benefit and protection; and,

Whereas, the problems confronting the growers represented by the membership of the National Wool Growers' Association are common to the problems and needs of other branches of livestock and crop production; and,

Whereas, at present the various organizations representing the producers of other classes of livestock and crops are working more or less independently, and consequently progress is slow, largely because of a lack of co-operation and concerted action; therefore, be it

Resolved, That the National Wool Growers' Association should actively join with other agricultural and livestock organizations in efforts to establish a more adequate system of normal financing of agricultural production and marketing, to the end that it may be possible for individual or organized producers to retain ownership in their products, through sufficient length of time to permit them to go into the channels of consumption, without necessity for sale to pure speculators.



# IMPORTANT EVENTS.

## AMERICAN WOOL INDUSTRY, 1920.

- JANUARY 8-10. United States Government wool auction at Boston. Maximum price, \$2.06. Scoured basis, fine or near fine, super-skirted 58s-60s.
- JANUARY 21. British Government auction of Australian wools at Boston.
- JANUARY 26. Sale of approximately 200,000 lbs. greasy carpet wool, by United States Government under sealed bids at Boston. \*
- FEBRUARY 2. Conference on cost of clothing in office of Special Attorney General Howard E. Figg, Washington, D. C., attended by committees from National Association of Wool Manufacturers, American Association of Wool and Woolen Manufacturers, and by representatives of clothing wholesalers and retailers, department stores, and cutters' labor.
- FEBRUARY 5. British Government auction of Australian wools at Boston.
- FEBRUARY 10-13. United States Government wool auctions at Boston. Demand still strong for fine wools. Second day's sales characterized by many withdrawals.
- FEBRUARY 16. United States Government wool auction under sealed bids at Boston.
- FEBRUARY 19. Second sale of British Government Australian wools at Boston.
- MARCH 3-6. United States Government wool auction at Boston. Sustained demand for fine wools, heavy withdrawals of coarser wools.
- MARCH 8. United States Supreme Court rules that stock dividends are not taxable as income.
- MARCH 19-25. Hearings before Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D. C., on textile branding legislation. Brief against the so-called "Truth in Fabric" bills presented by a committee of the National Association of Wool Manufacturers.
- MARCH 25. British Government auction of Australian wools at Boston.
- APRIL 7. A new wage plan considered for adoption by the Cleveland Garment Manufacturers and the International Ladies' Garment Workers' Union.



- APRIL 8. Morning and afternoon sales United States Government wool auction showed increased interest. Slightly more than 61 per cent of offerings were sold.
- APRIL 10. "Outlaw" railroad strike began.
- APRIL 10. British Government auction of Australian wools at Boston.
- MAY 1. National Association of Wool Manufacturers received a letter from Textile Workers of America, asking for an increase of 17 per cent in wages.
- MAY 5. Amalgamated Textile Workers issued demand for 44-hour week, 50 per cent increase in wages, and "recognition of the union."
- MAY 9. United States Government wool auctions at Boston, about 42 per cent of offerings being sold.
- MAY 12. Textile Workers of America informed that the Association had no authority to act in matters of wages.
- MAY 15. Some of the largest mills in New England posted a notice of a 15 per cent increase in wages, effective May 31.
- MAY 16. John Wanamaker department stores in New York and Philadelphia began a general 20 per cent reduction sale.
- MAY 17. Senator David I. Walsh, of Massachusetts, made a speech in the United States Senate, accusing the American Woolen Company of profiteering.
- MAY 20-21. British Government auction of Australian wools at Boston.
- MAY 22-JUNE 15. Mills in various parts of the country went on short time on account of the large volume of cancellations.
- MAY 25. Special meeting of stockholders of the American Woolen Company.
- MAY 26. American Woolen Company indicted for profiteering.
- MAY 29. Dye conference called in Washington, D. C., following the tabling of the dyestuffs bill.
- JUNE 6. Public sale of clothing opened in Madison Square Garden, New York.
- JUNE 10. United States Government wool auction at Boston. Only about 400,000 lbs. were sold out of 6,750,000 offered.
- JUNE 11. Indictment of the American Woolen Company quashed.
- JUNE 11. United States Government wool auction under sealed bids at Boston.
- JUNE 12. Warren G. Harding, of Ohio, nominated for presidency by Republican Convention at Chicago.

## 220 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

JUNE 17-19. Conferences at Chicago and Washington concerning financing of wool clip.

JUNE 23. Gimbel Brothers Department stores, New York, Philadelphia, and Milwaukee, indicted for profiteering.

JUNE 24. Clothing sale in Madison Square Garden abandoned.

JULY 1. Various mills, East and West, announced shut-down for indefinite period.

JULY 2. Last day of Wanamaker 20 per cent reduction sale.

JULY 5. James M. Cox, of Ohio, nominated for presidency by Democratic Convention at San Francisco.

JULY 8. Culbertson, Grote & Rankin Company, Spokane, Washington, acquitted of profiteering, on sixty counts.

JULY 15. War Trade Board announces that dye importations under specified conditions will be permitted.

JULY 22. United States Government wool auction under sealed bids at Boston.

AUGUST 2. Interstate Commerce Commission announced a general increase in freight and passenger rates; passenger increase 40 per cent, Pullman 50 per cent, Eastern freight rates 40 per cent, Western 45 per cent, Southern, Mountain and Pacific 25 per cent.

AUGUST 25. United States Government wool auction under sealed bids at Boston.

SEPTEMBER 7. Strike of wool handlers in Boston.

SEPTEMBER 8-15. Various large factors in the wool industry announced opening prices for spring lines, 1921. Prices from 15 per cent to 35 per cent below corresponding prices in 1920.

SEPTEMBER 22. Henry Ford announces a general reduction in the price of his automobiles.

SEPTEMBER 23. Mail order houses announced general cut in prices.

SEPTEMBER 29. United States Government wool auction under sealed bids at Boston.

OCTOBER 1. First of the Australian wool auctions at Adelaide.

OCTOBER 15. General strike of clothing labor in New York threatened as result of proposal of employers to return to piece-work basis of wages.

OCTOBER 25. Two large St. Louis dry-goods jobbing houses open "readjustment sales."

OCTOBER 28. United States Government wool auction at Boston.

NOVEMBER 2. Warren G. Harding elected President and Calvin Coolidge Vice-President of the United States.

- NOVEMBER 5. Wool growers announce intention to fight for immediate revision of tariff.
- NOVEMBER 7. Senator Smoot, at conference of Utah State Wool Growers Association, promised to urge President-elect Harding to call an extra session of Congress immediately after March 4th.
- NOVEMBER 10. Reported that 40,000 workers were idle in New York cutting trade, owing to failure of manufacturers and cutters to negotiate a new wage contract.
- NOVEMBER 18. United States Government wool auction at Boston.
- NOVEMBER 20-30. Boston retail clothiers announced general reduction of 33 1-3 per cent.
- DECEMBER 1. Conference in New York between various textile interests for discussion of cancellations. Committee formed to draw plan for Bureau of Commercial Contracts.
- DECEMBER 1. Reported that 11,000 clothing workers in Baltimore are seeking other employment on account of the continued depression in clothing industry.
- DECEMBER 9. Hearings before a Committee on Ways and Means of the House of Representatives on the subject of equalization of exchange in relation to the tariff. Committee from the National Association of Wool Manufacturers, and representatives of wool growers appeared.
- DECEMBER 13. Wage adjustment notices posted by various New England mills. Reduction of 22 1-2 per cent, bringing wages to the level immediately before the advance of December 1, 1919.
- DECEMBER 14-16. American Woolen Company auctioned surplus stock of overcoatings in New York, prices realized not far from the prevailing market.
- DECEMBER 20. Representative Fordney introduced into the House of Representatives an emergency tariff bill for the protection of agricultural products.
- DECEMBER 20-22. Fordney bill passed House of Representatives by a vote of 196 to 86.
- DECEMBER 22. General cut in Fall River wages amounting to 22 1-2 per cent, announced to take effect January 23, 1921.
- DECEMBER 23. Fordney Emergency Tariff bill introduced into the Senate.
- DECEMBER 30. United States Government wool auction at Boston.

## Editorial and Industrial Miscellany.

### MORE LIGHT ON THE ORIGIN OF THE COMPULSORY BRANDING PROPAGANDA.

IN the *Daily News Record* of February 5, 1921, Mr. George D. Briggs, advertising manager of Strong, Hewat & Co., is quoted as having said respecting the virgin wool campaign: "I think it will be generally agreed that the virgin wool campaign as sponsored by Strong, Hewat & Co. for the advancement of truth in fabrics has been a successful Selling Idea. And I feel that the great benefits of this selling idea are now beginning to be really appreciated, owing to the success achieved in placing the idea through the retailer before the public."

"Through our educational window displays which resulted from the interest aroused among the retailers by our campaign, we have told the story of virgin wool and its manufacture in more than 100 cities and towns, covering the entire country. In the retailers' own show windows (by their own request) in state fairs (in most cases to audiences of 25,000 and more), in agricultural colleges and in thousands of newspaper reports, the public has seen and heard the truth about virgin wool."

Mr. Briggs, as a member of the American Sheep and Wool Bureau, it will be remembered, appeared before the House Committee on Foreign and Domestic Commerce at the hearings held in March, 1920, to urge the passage of the French-Capper compulsory branding bill in the interest of the innocent purchaser. He also appeared recently before Congressional Committees as a member of the Wool Bureau in favor of the enactment of emergency legislation to save the wool industry. It is interesting to have the declaration we made in the October issue that this agitation, in its present form, is part of an advertising scheme, confirmed by so responsible a person as the advertising manager of the firm behind it.

## MR. ALEXANDER WALKER'S RENUNCIATION OF AN IMPORTANT STATEMENT IN HIS CONGRESSIONAL BRIEF.

ONE of the arguments used in favor of the compulsory branding bill by its advocates and insisted upon on all occasions by the National Sheep and Wool Bureau is that two-thirds of "all wool cloth manufactured in the United States in 1919" (when over six hundred million pounds of wool were consumed) "was made of shoddy and not of virgin wool, as the people believed when buying clothing offered them as all wool."

The quoted portion of the preceding paragraph is the deliverance of Mr. Howard E. Greene, Secretary of the National Sheep and Wool Bureau, in a broadside which appeared in October. It is persisted in by Mr. Greene, who refuses to accept authentic figures of the United States Census, but uses without question loose, inaccurate and, therefore, misleading estimates of men who know little or nothing of textile fabrics or textile production.

The easiest way and the simplest way to answer Mr. Greene is to quote what Mr. Alexander Walker, President of the National Sheep and Wool Bureau, was compelled by Representative Winslow to admit when he testified last March before the House Committee on Interstate and Foreign Commerce. The admissions unwillingly and grudgingly made by Mr. Walker put Mr. Greene in a position, where if Mr. Walker is right, Mr. Greene is hopelessly mistaken or purposely wrong. It is impossible to reconcile Mr. Greene's statements with the admissions forced from Mr. Walker. In that portion of his brief presented to the Congressional Committee in which he attempted to answer objections registered against the French bill, Mr. Walker made many statements which he was forced to admit were not true. Among them is:

"Although some fabric manufacturers may deny it—the fact remains that modern machinery makes it possible to use shoddy in worsteds as well as in woolens." (Hearings, p. 465, item d.)

The implication was that worsteds made in this country are made of shoddy.

When, however, Mr. Walker was cross-examined by Representative Winslow he confessed the foregoing statement could not be substantiated, and he qualified it. This was brought out by the following questions and answers:

Mr. Winslow. What percentage of the cloth made in this country do you think is represented by the so-called worsted line?

Mr. Walker. I will accept the figures of the opponents.

Mr. Winslow. Are you going to accept their statement, as I understand it, that these worsteds are all made of virgin wool?

Mr. Walker. I accept that statement, so far as this country is concerned. I do not think that we have yet ceased to be an inventive nation, and I believe that we are liable to have machinery invented some time—in fact it is reported that it is already invented on the other side—by which they will be able to use shoddy in worsteds. At this time we have no such machinery in this country.

Mr. Winslow. You would not want to invest in that?

Mr. Walker. No; I would not want to go into any company at this time that was advancing that machinery. (Hearings, p. 472.)

What is to be thought of a man who makes one statement in his brief and is forced to make the admissions Mr. Walker did in the foregoing?

Treating of the proportion of unused and reworked wool used in the wool manufacture Mr. Walker boldly asserted in his brief

That not merely  $11\frac{1}{2}$  per cent—as alleged by the opponents of the truth-in-fabric law—but at least  $66\frac{2}{3}$  per cent of the raw material used in apparel, including worsteds sold as all wool, is made from substitutes.

That at least  $66\frac{2}{3}$  per cent—not merely  $11\frac{1}{2}$  per cent, as alleged by the opponents of the truth-in-fabric law—of the fabrics produced in the United States contain substitutes, and therefore that there is imperative need, in the case of at least  $66\frac{2}{3}$  per cent of the fabrics produced in the United States, of the protection which the truth-in-fabric law provides. (Hearings, pp. 466 and 467.)

So much for Mr. Walker's brief. When, however, Mr. Walker came to be examined, he wilted and admitted that the foregoing statements could not be substantiated; in fact, he accepted, as he said to Colonel Winslow, "the figures of the opponents" respecting worsteds! The conversation between Mr. Winslow and Mr. Walker shows so clearly how Mr. Walker tried to avoid the issue, and how he finally was forced to capitulate that no apology need be made for reprinting the portions which contain his renunciation, and which likewise dispose effectively of Mr. Greene's false and baseless statements. After getting Mr. Walker to admit that worsteds made in the United States (the discussion had not been about those made abroad) contained nothing but virgin wool, Mr. Winslow asked:

What percentage of the cloths made in this country, other than worsteds, are made of virgin wool?

Mr. Walker. Well, Colonel, that is a nice question.

Mr. Winslow. Roughly, I mean.

Mr. Walker. I would dispute the statement of the opponents that



80 per cent of the 40 per cent is manufactured of virgin wool, because in my experience with the mills of the country—and I know them fairly well—I know very few mills that use all virgin wool; so few that it is a joke in the business.

Mr. Winslow. What is the proportion of those that do use all virgin wool, including yourselves?

Mr. Walker. I would say between 10 and 20 per cent of the 40 per cent.

Mr. Winslow. Were virgin wool?

Mr. Walker. Yes.

Mr. Winslow. That would give about 20 per cent that were not?

Mr. Walker. Of the wool goods, yes, sir; and that would be very liberal.

Mr. Winslow. If 60 per cent are made as worsteds and are all-virgin wool, simon-pure, and only 20 per cent of the remaining 40 per cent—which would be 10 per cent of the original, if my mathematics are right—are all wool, not made of virgin wool, the development of the virgin-wool cloth business, outside of worsteds, has not been very rapid, has it?

Mr. Walker. That is a very simple thing to explain——

Mr. Winslow. Would that not be a mathematical fact?

Mr. Walker. No; they use the substitute because in our business there is no incentive to use pure virgin wool. There is no incentive for us to make virgin-wool fabrics. The only question the trade ask to-day—the only thing they want to know—is, “Is this fabric all wool, and what is the price?” They know they can get away with the public with that statement.

During hard times in this country—we have been through them in the woolen-manufacturing business, and all of us know what they are in our business—what happens? A manufacturer is forced not to compete on quality, but on price. He pushes down and pushes down the price. We are trying to get out a fabric that is cheaper than Jones makes. We use more shoddy. The man next door wants to get out a cheaper fabric than we make, and he uses more shoddy than we do, and he gets away with it; and the tendency is to use more and more shoddy, and what happens? It promotes bad business all over the country, and that necessarily reacts on the sheepman. Flop goes the price of wool. There were times in this country when wool went down to 6 cents with a protective tariff of 11 cents. It went down to 6 cents because everyone was competing on the basis of price.

Mr. Winslow. I would like to return to that with you after we get this other matter fixed up.

Mr. Walker. All right, Colonel.

Mr. Winslow. We will assume that there is a hundred per cent of woolen cloths produced. Sixty per cent of them we will agree are worsted, all-virgin wool. That leaves 40 per cent. If I understood you correctly, not over 10 per cent of the 40 per cent would represent virgin-wool cloths.

Mr. Walker. I think I said 10 per cent or 20 per cent.

Mr. Winslow. Ten or twenty per cent?

Mr. Walker. I might say 10, 20, or 25. All right, 20 per cent.

Mr. Winslow. Twenty per cent of the remaining would leave, as I see it, 10 per cent of the 100 per cent that we started with.

Mr. Walker. No; I do not figure it that way. You are distinctly wrong there. Let us take the production of woolens in yards.

Mr. Winslow. No; it is 8 per cent rather than 10. Of that amount 60 per cent is worsted?

Mr. Walker. Yes.

Mr. Winslow. And that leaves us 40 per cent to consider, and you say 20 per cent of that—

Mr. Walker. No; I do not say 20 per cent of 40 per cent, but I say 20 per cent of the total amount produced. If we had 200,000,000 yards of woollen fabrics produced in the United States, 80 per cent of them would be shoddy fabrics and 20 per cent virgin wool fabrics.

Mr. Winslow. Out of that 40 per cent remaining what per cent do you say would be virgin wool production?

Mr. Walker. I say of the 40 per cent remaining 80 per cent of that quantity would be shoddy materials and 20 per cent of that quantity would be virgin wool materials.

Mr. Winslow. Twenty per cent of the 40 per cent left—

Mr. Walker. I do not say 20 per cent of the 40 per cent. Do not misunderstand me. If 40 per cent constituted 1,000,000 yards, for the sake of argument, 80 per cent of that—800,000 yards—would be shoddy, and 200,000 yards would be virgin wool.

Mr. Winslow. You are probably right, and I am a bonehead. However, suppose we had 1,000,000 yards as the total production.

Mr. Walker. Yes.

Mr. Winslow. Sixty per cent of that is worsted. That would be 600,000 yards, would it not?

Mr. Walker. Yes, sir.

Mr. Winslow. What number of yards out of the 400,000 yards remaining would be woollen with the virgin wool thread in them?

Mr. Walker. Four hundred thousand yards? Eighty per cent of that would be 320,000 yards of shoddy fabrics and 80,000 yards of virgin wool fabrics.

Mr. Winslow. That would be 20 per cent, would it not, of the 40 per cent remaining, where we started?

Mr. Walker. Yes; you are about right.

Mr. Winslow. I guess I am right.

Mr. Walker. You are quicker than I am, Colonel.

Mr. Winslow. Now, that would give us 10 per cent of the remaining amount not made of worsted and not worsteds, made of virgin wool?

Mr. Walker. Yes, sir. (Hearings, pp. 473 and 474.)

In the light of this admission forced from the unwilling witness, Mr. Alexander Walker, President of the National Sheep and Wool Bureau, what becomes of practically the same statement repeated and emphasized by Mr. Howard E. Greene, Secretary of the organization, in October, at least six months after his chief's renunciation before

the Congressional Committee in Washington? Is it a case of unfamiliarity with his president's testimony, or a desperate disregard for facts in his mistaken propaganda?

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### INTERDEPENDENCE OF WOOL GROWING AND WOOL MANUFACTURING.

ATTENTION is called to a resolution passed at the recent annual meeting of the National Wool Growers' Association, printed on another page of this issue. This recognizes the well-known fact that the manufacturers and the wool growers cannot be successful if the domestic wool manufacturers are denied by the law the chance to conduct their business with profit. The convention resolved that:

Recognizing that American manufacturing of wool is a co-ordinate branch of our industry and is the only available market for American-grown wools, we therefore urge that adequate compensatory and protective duties be levied upon imports of goods manufactured from wool.

Recognition of this interdependence was the cornerstone on which were built up the two industries of wool growing and wool manufacturing, and it is as important today as when it was first declared in 1866. Without duties adequate to compensate the domestic wool manufacturer for the duties paid upon his imported wools, and to place him on an equality with foreign rivals, the domestic wool grower will have no market in which to dispose of his clip. The domestic manufacturer is his best and only customer and the grower cannot prosper unless the manufacturer is successful. This was well understood by the wool growers of past generations, but has apparently escaped the attention of those who now constantly make it appear that wool manufacturers are their enemies, bent upon injuring them and reducing their flocks. Addressing the Indiana wool growers on May 30, 1883, Mr. A. M. Garland, of Illinois, a distinguished wool grower of his day and president of the National Wool Growers' Association, impressed his hearers with that very fact. In that speech, which was a defense of the tariff law of 1883, he said respecting the relation of wool growing and wool manufacturing:

There is another phase of the subject which cannot be ignored when considering the encouragement and protection of domestic wool production. That is the effect of such legislation upon woollen manufactures. The manufacturers of woollen fabrics must be

prosperous, and be able to pay fair prices for wools, or the men who grow the wools cannot be prosperous; and any legislation that omits to recognize this concurrence of interest between the two branches of the wool industry must of necessity fail to bring permanent benefit to either. \* \* \* \* I do not mean to say that wool-growers should undertake to dictate the details of a schedule on woolens; nor would I advise them to accord to manufacturers all they might claim by way of protection to their business; but I would seek for and defend such arrangement as will allow the manufacturers full scope for all the capital and energy they can employ consistent with their own and the public welfare. I would not allow them a monopoly; but I would allow them every opportunity for control of the markets of this country that could be guarded against the possibility of imposition upon the sellers of wools or the buyers of woolens. In this I would follow the prompting of that selfishness which seeks to provide the safest market and to insure the most permanent prosperity to the wool-growers.

The same idea was expressed by Mr. John P. Wood, President of the National Association of Wool Manufacturers in his recent brief presented to the Committee on Ways and Means, January 31, 1921. In it he conceded the necessity for a wool tariff for the domestic wool growers, saying:

We approve a protective tariff for the industry of wool-growing, believing it to be of great importance that the United States should be as nearly as possible independent of foreign sources of supply for a raw material so necessary as is wool. The experience of our Government throughout the year 1918 sufficiently demonstrated that, and confirmed the wisdom of statesmen of earlier generations who, by reason of experience in the Revolutionary War and the Civil War, undertook to provide for the development of a domestic supply.

Stressing the point that wool growers cannot be successful in this country unless the domestic manufacturers are successful, he called attention to that matter which was well understood by the wool growers of former generations, using these words:

No matter how high a duty is placed on raw wool, as I said before, it will afford no benefit to wool growers unless the duty on the wool contained in manufactured products is sufficient to fully equal the duty which would have been charged on the identical wool in such goods, if it had been brought into the United States in its natural condition.

A protective duty on wool will be of no benefit to the domestic wool growers unless their wool can be used in American mills; for if domestic mills cannot operate profitably the home-grown wool would have to be sold abroad, and if sold abroad it would derive no benefit from the United States tariff on imported wools.

To make a wool duty effective for the encouragement and protection of the domestic wool-growing industry it is obviously necessary that the wool be manufactured in the United States, and to make that possible it is equally essential that the right amount of duty charged against the wool in imported goods, and that in addition thereto adequate duties be provided for the protection of the manufacturing of wool.

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### PROTECTIVE DUTIES AND THE WOOL MARKET.

THE great need of today is market stability. No business man knows whether to go into the market or stay out of it, and that is the chief cause of our present halting condition. Uncertainty creates instability, inactivity, unemployment, and business depression. All periods of tariff revision bring such conditions in greater or less degree. Revisions, therefore, should be as infrequent as possible to prevent frequent recurrence of uncertainty. Peculiar conditions existing in the world make it extremely difficult to frame a law adequate to meet the world's condition, created by the greatest military conflict of the ages. The time, therefore, calls for men of patience to hear the case thoroughly, to weigh the evidence carefully, and decide courageously. They should not be carried off their feet by unjust demands for unnecessary rates. They should be ever mindful of past experience and the very unstable conditions which followed injudicious legislation in the past, bearing in mind always what is best for the country, and keeping ever before them the old Latin maxim, "You will journey most safely in the middle." Extremes must be avoided if the country is to reap the benefits from such legislation, and the stability so much desired is to be secured by law. We should profit by past experience and heed the advice given by sages of the past. As long ago as May, 1883, Mr. A. M. Garland, President of the National Wool Growers' Association, addressing the Indiana wool growers, told them that

Wool tariffs have usually been short-lived. Opposed at their adoption, they have been exposed to a ceaseless and too often successful warfare, ending in repeal or modification.

The Hon. Justin S. Morrill, a firm friend of both the wool grower and the wool manufacturer, and chairman of the Committee on Ways and Means, which reported the bill of 1867, said in speaking of the tariff law of 1883:

The great error of those who favor a protective tariff is that they sometimes ask too much, and, if that is granted, they have to



meet not only too much home competition, but also well-grounded opposition, because the rates are excessive. The present compound duties on clothing wools are equal to a rate of over 55 per cent *ad valorem*; and the law which goes into effect on July 1 will still leave the rate at over 44 per cent. Very few domestic productions have as much—this being above the average of all dutiable articles—and I do not think any discreet friend of sheep husbandry would make himself conspicuous by asking for more, and thereby run the risk of losing all.

In his annual address at the recent convention of the National Wool Growers' Association, President Frank J. Hagenbarth had this to say respecting the tariff:

The old days of the tariff as a strictly political question has, we believe, for all time been laid on the shelf. The rank and file of the Democratic party, on the one hand, have learned that America comes first and theory second, and on the other hand, the extremely high protectionists have learned that a tariff must be written to protect and not rob the public.

If the experience of the past is taken as a guide and the advice of men who have had a part in the framing of tariff acts in those years that have gone is not rejected, extremes will be avoided and a bill will be submitted which will not cause a reaction, but meet the approval of men who believe that the industries of this country are entitled to high consideration and must be preserved if we are to be a self-sacrificing nation and not compelled to rely for necessities of life, in time of peace and war, upon those beyond our borders. Only by pursuing such a course can a law be enacted which will have a reasonably long span of life. Only by such a law can the axe of the free trader be held off and the protective policy be preserved.

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#### REPRESENTATIONS MADE TO CONGRESS BY OFFICIALS OF THE BOSTON AND PHILADELPHIA WOOL TRADE ASSOCIATIONS.

CONCERNING conditions in the wool trade, the Executive Committee of the Philadelphia Wool and Textile Association passed on March 29, 1921, the following resolutions:

The Executive Committee of the Philadelphia Wool & Textile Association views with grave concern the very large importations of wool, wool tops and cheaply produced foreign goods which are now being imported into this country under the present low import duties of the Underwood tariff law in anticipation of an upward revision of the entire tariff schedule, and



Whereas, it is inevitable that the effect of these tremendous importations will be to defer the beneficial results of any tariff legislation for an indefinite time and extend the period of unemployment in many industries, further add to the present business depression, and retard the marketing of the unsold portion of the 1920 wool clip, and

Whereas, if the wool growing industry of this country is to survive, and future needs of our increasing population are to be met, it is of the utmost importance that the production of wool in U. S. A. be stimulated by wise legislation, and

Whereas, with the near approach of the new clipping season, the growers are confronted with a serious problem in the marketing of their 1921 wools, due to decreased consumption and a heavy carry over of stock of wool from 1920, and

Whereas, the general conditions affecting the woolen textile business are unfavorable and are bound to become more so, if prompt relief is not granted by the immediate re-enactment without delay of some previous protective Tariff law—to apply as a stop gap tariff until such time as the permanent schedule of protective duties can be formulated, and

Whereas, the wool growers, the wool dealers and all those engaged in the fabrication of wools to any degree are mutually interdependent; therefore, in justice to and in conservation of all these interests,

Be it resolved, that, in view of the increasing menace of the conditions described, and the urgent need of prompt action, the Philadelphia Wool & Textile Association call upon Congress for the immediate re-enactment of the Tariff law of 1909, without amendment, to relieve the present situation, pending the passage of the permanent Tariff law for which the Republican party stands pledged.

In the latter part of March the Executive Committee of the Boston Wool Trade Association sent to the Senators and Representatives from Massachusetts and Cabinet members a communication in which, among others, the following representations were made:

Temporarily, purchases of wool in foreign countries for import to the United States have been largely discontinued awaiting the tariff policy of the new administration. If, however, immediate action on tariff is not taken heavy purchases are likely to be resumed. This will result in added difficulties to the wool grower of the United States in disposing not only of the balance of his 1920 clip, at least 50 per cent of which is unsold, but also untold loss in the value of his approaching clip.

In his contribution to the clothing and food supply of the country the wool grower is making a very valuable addition to the resources of the nation and we believe that he should be enabled to conduct his business profitably in order that he may continue.

The importations of wool in the shape of manufactured goods other than tops and yarns have not been material so far this year, but owing to the demoralized state of exchange, and the lower costs of manufacturing abroad, heavy importations of wool in all manu-

factured forms can surely be expected to follow the already very heavy importation of raw wool.

Whatever protection is accorded to raw wool will be effective only if adequate duties are placed on tops, yarns, and manufactured goods. The ultimate customer of the American wool grower, namely the American manufacturer, must be sufficiently protected. The situation demands prompt attention.

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#### CLAUSES OF FORDNEY EMERGENCY TARIFF BILL RELATING TO WOOL AND MANUFACTURES THEREOF.

WE print below the two sections of the Emergency Tariff bill which provided rates for wool and wool manufactures. The bill was reported from the Committee on Ways and Means to the Committee of the whole House on December 20, 1920. It was passed by the House on December 22, 1920, by the Senate on February 16, 1921, agreed to in conference on February 24, 1921, and vetoed by President Wilson on March 3, 1921. The text of the two paragraphs is as follows:

18. Wool, commonly known as clothing wool, including hair of the camel, Angora goat, and alpaca, but not such wools as are commonly known as carpet wools: Unwashed, 15 cents per pound; washed, 30 cents per pound; scoured, 45 cents per pound. Unwashed wools shall be considered such as shall have been shorn from the animal without any cleaning; washed wools shall be considered such as have been washed with water only on the animal's back or on the skin; wools washed in any other manner than on the animal's back or on the skin shall be considered as scoured wool. On wool and hair provided for in this paragraph, which is sorted or increased in value by the rejection of any part of the original fleece, the duty shall be twice the duty to which it would otherwise be subject, but not more than 45 cents per pound.

19. Wool and hair of the kind provided for in paragraph 18, when advanced in any manner or by any process of manufacture beyond the washed or scoured condition, and manufactures of which wool or hair of the kind provided for in paragraph 18 is the component material of chief value, 45 cents per pound in addition to the rates of duty imposed thereon by existing law.

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#### WYOMING'S TEXTILE BRANDING LAW.

ADVOCATES of compulsory branding of wool fabrics are pursuing their policy with great vigor, if not with much wisdom. Their tactics this year have been to introduce bills into the legislatures of many states, and attempt by that procedure to attain their end or thus

bring pressure upon their representatives in Washington to support the French-Copper bill in Congress.

The first state to enact such legislation is Wyoming, where the speed with which the measure was enacted was remarkable. Within two weeks from the day the bill was introduced it was approved by the Governor and became a law of the state. No hearings were held, the bill was passed unanimously without debate, and with record speed. It is an exceedingly crude measure and like many of the laws passed in some states, aimed at foreign insurance companies, will work hardship on citizens of Wyoming without accomplishing the pretended object of its enactment.

It will enable big mail order houses outside the jurisdiction of the state to ship to patrons within the state both fabrics unmarked and suits not labelled as required by the act. In that way it will lessen the business transacted within the state by its citizens, taxed to support it, and it will create business for firms beyond its borders not affected by its tax legislation and not subject to its criminal statutes. It will be interesting to see how the law will be enforced and how long Wyoming's people will be satisfied with the restrictions placed upon them by it, and be willing to see fellow citizens penalized and their business restricted for the benefit of citizens of other states and other countries.

#### THE LAW.

"A bill for an act requiring the labeling of all cloth, fabric, garments or articles of apparel sold or offered for sale in this State which contain wool or purport to contain wool, and of all samples containing or purporting to contain wool displayed in this State in soliciting orders, and providing for punishment for violation of the Act. (House Bill No. 227.)

"Be it enacted by the Legislature of the State of Wyoming.

"Section 1. Every person, firm or corporation selling or offering for sale in this state any cloth, fabric, garment or article of apparel containing wool or purporting to contain wool, or displaying in this State any sample of cloth, fabric, garment or article of apparel containing wool or purporting to contain wool shall place thereon a conspicuous label in one of the three following forms:

1. All virgin wool.
2. Not less than . . . per cent virgin wool.
3. No virgin wool.

"Virgin wool is wool which previous to its use in the labeled article never has formed any part of any cloth, fabric, garment or article of apparel. In the event that any article is labeled in the form indicated as number "2" above, the blank in such form shall be filled in with some percentage. Provided, however, that in labeling any garment or article of apparel which contains lining, facings or

trimming, the label shall not be taken to refer and shall not refer to the lining or facing or trimming or the percentage or percentages of wool contained therein.

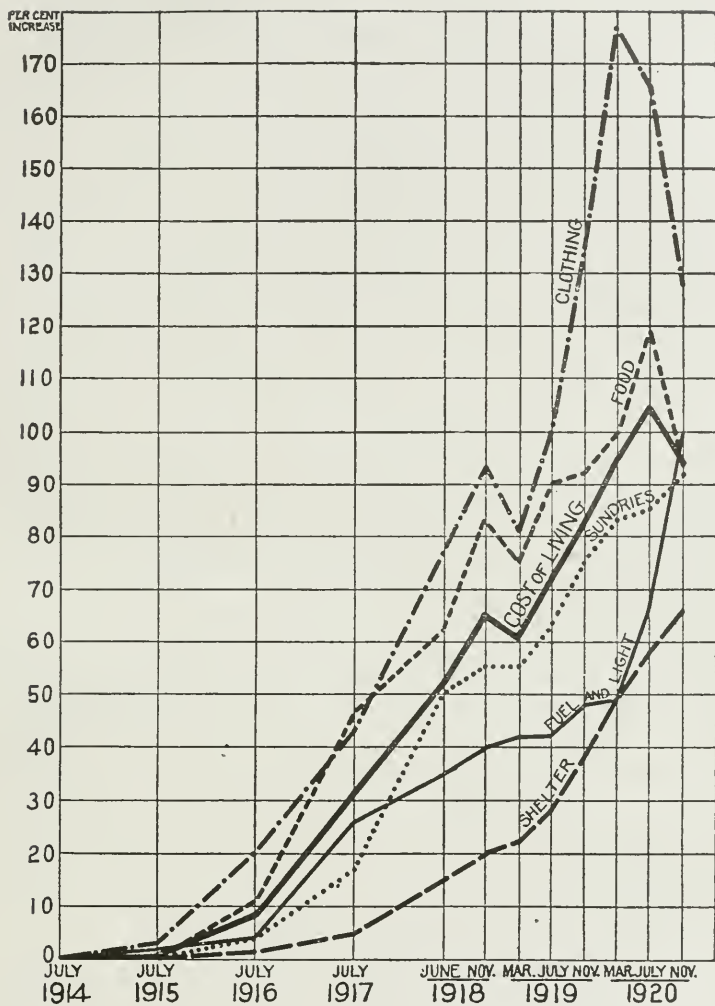
"Section 2. Any firm, person, or corporation who shall violate any part of this act or who shall by label state that the labeled article contains a greater percentage of virgin wool than it does contain, shall be guilty of misdemeanor and upon conviction thereof shall be punished by a fine of not less than Twenty-five Dollars (\$25.00) nor more than Five Hundred Dollars (\$500.00), or by imprisonment in a county jail for not less than ten (10) days nor more than sixty (60) days, or by both such fine and imprisonment."

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### CHANGES IN THE COST OF LIVING.

ON the accompanying chart, issued by the National Industrial Conference Board in its series dealing with changes in the cost of living in the United States, are shown the changes which occurred between July, 1914, and November, 1920, particularly with reference to the four-month period from July to November, 1920.

It will be seen that there was a steady rise in the cost of living from July, 1914, to July, 1920, except for a drop of about three per cent a few months following the close of the war, and that the decrease between July, 1920, and November, 1920, was nearly six per cent. The chart shows also that the decline in the total cost of living both in the immediate post-war period and in the four months between July and November, 1920, was caused by a fall in the prices of food and of clothing. Increases in these kept above the increase in the total cost of living during the entire period covered by the chart. The cost of shelter, fuel, light, and sundries, increases in which had been less than in the cost of living as a whole, showed a practically constant advance from July, 1914, to November, 1920. A tendency toward a leveling of percentages of increase in the cost of the wage items making up the total cost of living is thus afforded in both periods of declining prices.



## Statistics for First Quarter, 1921.

### ACTIVE AND IDLE MACHINERY, AS OF JANUARY 1, FEBRUARY 1, AND MARCH 1, 1921.

AS REPORTED BY THE BUREAU OF THE CENSUS,  
UNITED STATES DEPARTMENT OF COMMERCE.

THE reports issued by the Bureau of the Census of the idle and active machinery in the wool manufacture for the first quarter of the year 1921, covering the months of January, February, and March, are herewith presented. Those reports were begun by the National Association of Wool Manufacturers in December, 1913, and since that date they form a continuous record of the state of the industry. In November, 1918, the Bureau of Markets asked to take over the work and later it was turned over to the Census.

The report for January 1 was distinctly worse than that of the month previous, and perhaps indicates the worst stage of the depression, the percentage of idle machinery rising considerably in every class reported and ranging from 4.4 per cent for narrow looms to 11.5 per cent for combs.

The report for February 1 indicates a turn in the tide, slight as it was in some kinds of machinery, except in the carpet and rug looms, where it was 4 per cent worse than shown by the preceding month's report. In the broad looms there was an improvement of 3.1 per cent; in the narrow looms of .5 per cent; in the cards of 1.6 per cent; in combs of 9.1 per cent; in woolen spinning spindles of .5 per cent, and in the worsted spinning spindles of 7.8 per cent.

The report for March 1 shows a decided improvement in all directions except in the carpet looms, where the percentage of idleness increased from the 49.7 per cent shown in the February report to 60.5 per cent in the report of March 1. The wide looms showed an increase in activity of 10.8 per cent and the narrow looms of .7 per cent, while the carpet looms increased in



idleness 10.8 per cent, a rate exactly equal to the increase of the wide looms. Cards were 10.3 per cent; combs 15.5 per cent; woolen spinning spindles 11.7 per cent, and worsted spinning spindles 10 per cent busier than indicated by the report of February 1. A few more months of improvement at that rate will change depression into hope and inactivity into exhilaration. The whole tone of the industry from the wool grower to the manufacturer will be greatly improved, and the wrecks caused by the unexampled drop in prices recorded in the past nine months will be repaired and the scars removed. It is hoped that a basis for trading has been reached and that the industry may have an opportunity to satisfy the demands which will surely be made upon it to satisfy the needs of our people.

## January 1, 1921.

*Summary of Reports of 925 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	26,570	9,191	4,714	2,783	1,134	927,376	1,152,390
Idle . . . . .	35,261	8,919	3,972	3,858	1,273	1,354,276	1,188,514
Total . . . .	61,831	18,110	8,686	6,641	2,407	2,281,652	2,340,904

## February 1, 1921.

*Summary of Reports of 922 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	28,887	9,309	4,312	2,870	1,345	944,939	1,327,860
Idle . . . . .	33,800	8,833	4,262	3,728	1,049	1,352,603	1,002,575
Total . . . .	62,687	18,147	8,574	6,598	2,394	2,297,542	2,330,435

March 1, 1921.

Summary of Reports of 922 Manufacturers.

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	35,358	10,440	3,406	3,575	1,743	1,216,963	1,584,756
Idle . . . . .	26,731	7,458	5,211	3,072	689	1,086,637	780,377
Total . . . .	62,089	17,898	8,617	6,647	2,432	2,303,600	2,365,133

Percentage of Idle Machinery to Total Reported.

March 1, 1921 . .	43.1	41.7	60.5	46.2	28.3	47.2	33.0
Feb. 1, 1921 . . .	53.9	48.7	49.7	56.5	43.8	58.9	43.0
Jan. 1, 1921 . . .	57.0	49.2	45.7	58.1	52.9	59.4	50.8
Dec. 1, 1920 . . .	51.2	44.8	40.1	50.3	41.4	51.7	42.7

Number of Machines in Operation Per Shift Beginning January 1, 1921.

March 1, 1921:							
Single shift,	33,595	10,440	3,367	3,427	1,486	1,162,494	1,521,368
Double shift,	1,799	. . . . .	39	148	257	54,499	63,388
Feb. 1, 1921:							
Single shift,	27,510	9,309	4,272	2,785	1,129	922,766	1,281,316
Double shift,	1,377	. . . . .	40	85	216	22,173	46,544
Jan. 1, 1921:							
Single shift,	26,124	9,191	4,055	2,639	981	884,949	1,100,620
Double shift,	446	. . . . .	59	144	153	42,427	51,770
Dec. 1, 1920:							
Single shift,	29,528	9,957	5,063	3,139	1,190	1,050,640	1,297,701
Double shift,	649	. . . . .	58	176	218	52,963	35,500

Active and Idle Machine and Spindle Hours.

March 1, 1921:							
Active . . .	6,603,552	1,536,665	618,029	660,852	350,173	223,390,721	285,671,955
Idle . . . .	5,475,549	2,043,101	1,092,370	676,151	124,130	233,455,365	174,054,918
Feb. 1, 1921:							
Active . . .	5,120,762	1,300,307	644,828	492,853	240,400	167,838,013	215,102,563
Idle . . . .	7,692,284	2,620,214	1,119,997	886,376	250,428	304,638,487	265,976,086
Jan. 1, 1921:							
Active . . .	4,543,949	1,145,890	787,770	488,789	193,221	157,503,237	176,887,155
Idle . . . .	9,089,433	2,835,281	1,059,615	953,372	327,860	341,621,140	330,813,646
Dec. 1, 1920:							
Active . . .	5,194,419	1,490,748	942,368	597,452	239,272	198,552,216	218,409,778
Idle . . . .	7,701,531	2,272,927	808,414	794,179	249,093	232,560,878	250,664,315

Percentage of Idle Hours to Total Reported.

March 1, 1921 . .	45.3	57.1	63.9	50.6	26.2	50.5	37.9
Feb. 1, 1921 . . .	60.0	66.7	63.5	64.3	51.0	64.5	55.3
Jan. 1, 1921 . . .	66.7	71.2	57.4	66.1	62.9	68.4	65.2
Dec. 1, 1920 . . .	59.7	60.4	46.2	57.1	51.0	53.9	53.4

In making the changes, which will be noticed, in the manner of reporting the census of active and idle machinery for January, the Director of the Census said:

Statistics of active and idle machine-hours have been added to the report.

No change has been made in reporting active and idle machinery and the statistics relative to number of machines of the various classes active (single and double shift) or idle with the corresponding percentages are strictly comparable with those for earlier months.

Several months ago it was observed from notations on the margin of reports and from letters accompanying the same that many of the machines reported as active were in reality operated only part time. A report of the number of machines active and idle does not accurately reflect conditions in the industry when those shown as active are shifting from full time to part time or vice versa. To correct this difficulty the schedule was amended to include statistics of machine-hours, and these are here published for the first time. The total number of machine-hours or the number which an establishment must report to be considered as 100 per cent active is the maximum number of hours the plant could have been operated ON SINGLE SHIFT multiplied by the number of machines. Active machine-hours, of course, are obtained by multiplying the number of machines in use by the actual number of hours operated during the month. The difference between the total machine-hours and the active machine-hours represents idle machine-hours. Every effort has been made to fix the number of hours required for full capacity on single shift at the number the plant actually operates under favorable conditions. It is believed that these statistics are an important and valuable addition to the report.

## WOOL STOCKS AND CONSUMPTION.

It is not possible to print in this number of the BULLETIN the report of the wool stocks as of December 31, 1920, or the wool consumed for December, 1920, or the first three months of the current year, no such reports having been issued by the Bureau of Markets of the Department of Agriculture since November, 1920. It is to be regretted that these important statistical facts pertaining to the wool manufacture are even temporarily not available. It is hoped that their collection and publication will be resumed.

QUARTERLY REPORT OF THE BOSTON WOOL MARKET FOR  
JANUARY, FEBRUARY, MARCH, 1921, AND MARCH, 1920.

DOMESTIC WOOLS. (F. NATHANIEL PERKINS.)

	1921.			1920.
	January.	February.	March.	March.
OHIO, PENNSYLVANIA, AND WEST VIRGINIA.				
(UNWASHED.)	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Fine Clothing . . . . .	32 @ 34	32 @ 34	32 @ 34	76
1/2 Blood, Staple . . . . .	32 @ 35	32 @ 35	32 @ 35	85
1/2 " " . . . . .	28 @ 30	28 @ 30	28 @ 30	70
1/2 " " . . . . .	26 @ 28	26 @ 28	26 @ 28	66
Fine Delaine . . . . .	40 @ 42	40 @ 42	40 @ 42	100
MICHIGAN, WISCONSIN, NEW YORK, ETC.				
(UNWASHED.)				
Fine Clothing . . . . .	26 @ 28	26 @ 28	26 @ 28	73
1/2 Blood, Staple . . . . .	28 @ 30	28 @ 30	28 @ 30	82
1/2 " " . . . . .	26 @ 28	26 @ 28	26 @ 28	68
1/2 " " . . . . .	24 @ 26	24 @ 26	24 @ 26	66
Fine Delaine . . . . .	33 @ 35	33 @ 35	33 @ 35	95
KENTUCKY AND INDIANA.				
(UNWASHED.)				
1/2 Blood . . . . .	30 @ 32	30 @ 32	30 @ 32	72
1/2 " " . . . . .	28 @ 30	28 @ 30	28 @ 30	67
Braid . . . . .	13 @ 14	13 @ 14	13 @ 14	35
MISSOURI, IOWA, AND ILLINOIS.				
(UNWASHED.)				
1/2 Blood . . . . .	25 @ 26	25 @ 26	25 @ 26	65
1/2 " " . . . . .	22 @ 24	22 @ 24	22 @ 24	63
Braid . . . . .	13 @ 14	13 @ 14	13 @ 14	35
TEXAS.				
(SCOURD BASIS.)				
12 months, fine and fine medium . .	70	75	65	195
Spring, fine and fine medium . . .	55	58	55	170
Fall, fine and fine medium . . . .	48	50	45	155
CALIFORNIA.				
(SCOURD BASIS.)				
12 months, fine . . . . .	65	70	60	195
Spring, fine . . . . .	52	55	52	175
Fall, fine . . . . .	40	45	40	150
TERRITORY WOOL: Montana, Wyoming, Utah, Idaho, Oregon, etc.				
(SCOURD BASIS.)				
Staple, fine and fine medium . . .	85	90	75	205
Clothing, fine and fine medium . .	70	75	65	175
1/2 Blood . . . . .	65	70	60	190
1/2 " " . . . . .	50	55	50	130
1/2 " " . . . . .	40	42	38	112
NEW MEXICO.				
(SCOURD BASIS.)				
No. 1 . . . . .	70 @ 75	75 @ 78	70 @ 75	180
No. 2 . . . . .	45	50	40	128
No. 3 . . . . .	32	35	30	65
GEORGIA AND SOUTHERN.				
Unwashed . . . . .	20 @ 22	20 @ 22	20 @ 22	52

## DOMESTIC WOOLS.

The new year opened with a very healthy tone to the wool market following the very successful United States Government wool auction sale of December 30th, at which 100 per cent of the offerings were sold. The wool disposed of was largely of the lower grades and was absorbed principally by carpet wool interests.

The question of what action Congress would take relative to the tariff was the leading topic of interest in the trade. The failure to pass the Fordney Emergency bill by the late Administration caused a quiet market with a recession in wool values. Later on there were those who felt confident that the Harding Administration would promptly pass a protective tariff bill as soon as Congress convened in an extra session April 11th, and their confidence was reflected in their marking their prices up and by more liberal purchases, while those who were skeptical acted with marked conservatism.

The inactive condition among both the worsted and woolen mills in the period under review greatly curtailed the movement of wool at seaboard markets. Dealers and manufacturers were liberal buyers of wool in London, Australia, and South America, the London and Australian purchases running largely to 56s and above, while in the South American markets operators showed confidence in the lower grades by operating with considerable freedom.

Throughout the period a steady demand was experienced for fine stapled Territory wool, and later on there was a much improved demand for 4 and 5s domestic wool. Very little wool has been shorn in the West and large quantities of the 1920 Territory and California clip remain unsold, either being held back in the country or held in consignees' hands at seaboard markets. In the fleece sections of the country the "pools" are carrying large stocks, but there are evidences that they are desirous of unloading. On these wools the prices are much more in the buyers' favor than was the case some months ago.

F. NATHANIEL PERKINS.

Boston, April 1, 1921.



FOREIGN WOOLS. (MAUGER & AVERY.)

Scoured Basis, 1921.

	1921.			1920.
	January.	February.	March.	March.
Australian Combing:	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Choice . . . . .	120	115	110	280
Good . . . . .	90	87	85	230
Average . . . . .	80	83	75	210
Australian Clothing:				
Choice . . . . .	120	115	110	235
Good . . . . .	90	85	80	205
Average . . . . .	75	73	70	185
Sydney and Queensland:				
Good Clothing . . . . .	90	85	80	205
Good Combing . . . . .	90	87	85	230
Australian Crossbred:				
Choice . . . . .	35 @ 65	35 @ 65	35 @ 65	60 @ 135
Average . . . . .	30 @ 55	30 @ 55	30 @ 55	50 @ 120
Australian Lambs:				
Choice . . . . .	95	90	85	170
Good . . . . .	85	80	75	155
Good Defective . . . . .	60	57	55	140
Cape of Good Hope:				
Choice . . . . .	110	105	100	230
Average . . . . .	80	75	70	175
Montevideo:				
Choice . . . . .	80	75	70	200
Average . . . . .	70	65	60	170
Crossbred, Choice . . . . .	50	50	50	115
English Wools:				
Sussex Fleece . . . . .	100	78	75	135
Shropshire Hogs . . . . .	70	50	48	120
Yorkshire Hogs . . . . .	38	33	30	68
Irish Selected Fleece . . . . .	35	30	28	70
Carpet Wools:				
Scotch Highland, White . . . . .				50
East India, 1st White Joria . . . . .	33 @ 34	31 @ 32	30 @ 32	80
East India, White Kandahar . . . . .	30 @ 31	28 @ 29	27 @ 29	50
Donskoi, Washed, White . . . . .				
Aleppo, White . . . . .	35	30 @ 32	30 @ 32	48 @ 50
China Ball, White . . . . .	40 @ 42	36 @ 40	36 @ 40	80 @ 85
"    "    No. 1, Open . . . . .	30	26 @ 28	26 @ 28	45
"    "    No. 2, Open . . . . .	17 @ 18	17 @ 18	17 @ 18	40

FOREIGN WOOLS.

The principal feature in the market for foreign wools during the first quarter of the year was a steady demand for very fine, good stapled Australian wools and choice fine Territories and fine Delaine, largely created by the demand for goods for women's wear.

There was also a good demand for three-eighths and quarter blood wools, of a character suitable for the manufacture of knitting yarns.

A demand was also created for choice India wools and kempy Capes, for use in overcoatings and other descriptions for men's and women's wear.

The supply of grease wools for immediate consumption being somewhat limited, Bradford top-makers began shipping tops, which, until the passage of some Emergency Tariff bill, promises to assume large importance, and perhaps monopolize the field for fine worsted mills' consumption.

Wools from South America, South Africa, and Australia, in a large amount, are on the way in expectation of being landed here before the tariff bill can be passed by Congress.

MAUGER & AVERY.

Boston, April 1, 1921.

PULLED WOOLS. (W. A. BLANCHARD.)

	1921.			1920.
	January.	February.	March.	March.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Extra, and Fine A . . . . .	90 @ 105	85 @ 95	80 @ 90	185 @ 200
A Super . . . . .	65 @ 75	60 @ 75	60 @ 70	155 @ 170
B Super . . . . .	35 @ 45	40 @ 50	40 @ 50	110 @ 130
C Super . . . . .	25 @ 30	25 @ 30	25 @ 35	65 @ 80
Fine Combing . . . . .	65 @ 75	65 @ 75	65 @ 75	160 @ 180
Medium Combing . . . . .	45 @ 55	45 @ 55	50 @ 55	125 @ 140
Low Combing . . . . .	30 @ 35	35 @ 40	35 @ 40	80 @ 95

PULLED WOOLS.

Extending through the quarter there has been greater activity among the woolen mills, and this was reflected in an improved demand for pulled wools. During the first half of January the call was mainly for the finest grades, which then touched the highest point for the quarter. A shifting to heavy weights, principally overcoatings, subsequently changed the demand to medium and lower grades of wool, and A and B Supers, and C's in lesser amount, were readily sought for by manufacturers. This business continued through February and into March, when it gradually fell off, and supply over-took demand with a declining tendency in prices. The dulness and lack of strength in the market which marked the close of the quarter were also furthered by uncertainty in regard to tariff legislation.

W. A. BLANCHARD.

Boston, April 1, 1921.

## COMPARATIVE STATEMENT OF IMPORTS OF WOOL. 245

## COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS OF WOOL AND MANUFACTURES OF WOOL FOR THE TWELVE MONTHS ENDED DECEMBER 31, 1919 AND 1920.

## GROSS IMPORTS.

ARTICLES AND COUNTRIES.	Quantities for Twelve Months ended December 31.		Values for Twelve Months ended December 31.	
	1919.	1920.	1919.	1920.
<b>WOOL, HAIR OF THE CAMEL, GOAT, ALPACA, AND OTHER LIKE ANIMALS, AND MANUFACTURES OF:</b>				
<b>UNMANUFACTURED—</b>				
Class 1—Clothing (free)	<i>Pounds.</i>	<i>Pounds.</i>		
Imported from—				
United Kingdom . . . . .	14,704,025	28,967,677	\$10,439,222	\$22,298,256
Canada . . . . .	12,066,857	7,564,898	7,875,206	2,777,393
Argentina . . . . .	118,854,446	71,910,150	54,776,804	30,854,126
Chile . . . . .	11,959,417	14,514,334	5,685,451	8,228,532
Peru . . . . .	2,273,308	883,686	1,188,891	440,482
Uruguay . . . . .	49,931,366	29,767,584	27,147,910	19,832,931
China . . . . .	8,528,802	525,409	2,971,569	147,162
Australia . . . . .	46,034,615	37,371,888	26,684,885	11,620,969
New Zealand . . . . .	14,234,386	25,531	7,540,256	7,428
British South Africa . . . . .	51,468,180	17,296,456	25,059,358	10,459,918
Other countries . . . . .	4,046,336	3,564,627	1,919,177	2,334,146
Total . . . . .	334,099,538	212,392,240	\$171,258,562	\$109,001,343
Class 2—Combing (free)				
Imported from—				
United Kingdom . . . . .	3,221,370	2,020,062	\$2,387,838	\$1,304,777
Canada . . . . .	644,930	199,247	431,310	44,181
Argentina . . . . .	2,087,101	1,347,067	914,955	362,145
Other countries . . . . .	1,780,680	3,076,407	829,419	2,103,429
Total . . . . .	7,734,081	6,642,783	\$4,553,522	\$3,834,482
Hair of the Angora goat, etc. (dutiable)				
Imported from—				
United Kingdom . . . . .	161,436	1,043,100	\$150,673	\$632,508
Peru . . . . .	1,046,172	1,247,925	819,311	727,519
China . . . . .	156,957	489,425	86,525	375,831
British South Africa . . . . .	3,976,677	262,545	2,072,247	122,225
Other countries . . . . .	1,769,649	1,669,416	885,300	714,076
Total . . . . .	7,110,891	4,712,411	\$3,994,056	\$2,572,159
Class 3—Carpet (free)				
Imported from—				
Greece . . . . .	417,236	391,152	\$110,788	\$117,142
Italy . . . . .	76,001	97,487	26,048	20,405
Portugal . . . . .	226,045		82,707	
Russia in Europe . . . . .	410,858	323,942	91,700	248,671
Spain . . . . .	915,031	469,209	258,346	123,513
United Kingdom . . . . .	19,044,860	6,380,016	6,377,118	2,190,460
Argentina . . . . .	14,045,112	1,764,622	5,982,972	646,700
Chile . . . . .	13,274,457	3,715,570	5,976,919	1,377,458
Uruguay . . . . .	7,030,790	487,536	4,002,746	245,893
China . . . . .	29,813,744	11,762,921	9,656,721	3,248,207
British India . . . . .	66,218	365,900	7,236	75,129
Russia in Asia . . . . .	1,129,031	2,326,623	337,769	678,495
British South Africa . . . . .	2,386,257	674,041	1,055,570	430,315
Other countries . . . . .	8,112,684	7,111,118	2,931,721	2,141,716
Total . . . . .	96,948,324	35,870,207	\$36,898,861	\$11,564,104
Total wool unmanufactured,	445,892,534	259,617,641	\$216,764,501	\$126,972,038

COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS OF  
WOOL, Etc.GROSS IMPORTS. — *Continued.*

ARTICLES AND COUNTRIES.	Quantities for Twelve Months ended December 31.		Values for Twelve Months ended December 31.	
	1919.	1920.	1919.	1920.
	<i>Pounds.</i>	<i>Pounds.</i>		
MANUFACTURES OF —				
Tops (dutiable) . . . . .	980,914	1,175,052	\$1,207,937	\$1,448,326
Carpets and carpeting, etc. (dutiable)	<i>Sq. Yards.</i>	<i>Sq. Yards.</i>		
Carpets and rugs woven whole (dutiable) . . .	384,807	1,104,564	\$2,993,328	\$9,643,276
All other (dutiable) . .	78,001	561,086	341,270	2,043,079
Total . . . . .	462,808	1,665,650	\$3,334,598	\$11,686,355
CLOTHS (dutiable)	<i>Pounds.</i>	<i>Pounds.</i>		
Imported from—				
Belgium . . . . .	1,294	185,443	\$2,250	\$394,474
United Kingdom . . .	2,131,814	5,055,016	5,472,276	12,977,059
Other countries . . .	19,984	452,998	80,521	1,271,658
Total . . . . .	lbs. 2,153,092 sq. yds. 3,065,172	5,693,457 8,791,633	\$5,555,047	\$14,643,191
Cloth made of the hair of the Angora goat, al- paca, etc. (dutiable) .	<i>Pounds.</i> 140,980	<i>Pounds.</i> 504,206	\$365,582	\$1,303,029
DRESS GOODS, WOMEN'S AND CHILDREN'S (dutiable)	<i>Pounds.</i>	<i>Pounds.</i>		
Imported from—				
France . . . . .	4,254	392,241	\$29,431	\$1,299,831
United Kingdom . . .	252,982	1,250,919	786,397	3,116,081
Other countries . . .	23,177	83,993	69,058	293,656
Total . . . . .	lbs. 310,413 sq. yds. 1,056,657	1,727,153 3,577,655	\$884,586	\$4,709,568
Press cloth of camel's hair for oil milling pur- poses (free) . . . . .	<i>Pounds.</i> 22,673	<i>Pounds.</i> 15,608	\$29,823	\$18,408
Wearing apparel (duti- able) . . . . .			2,228,135	9,317,572
Rags, noils, and waste (free) . . . . .	4,321,589	6,973,679	3,956,575	4,246,577
Yarn, pounds (dutiable) .	468,650	3,670,374	989,134	7,818,889
All other manufactures of (dutiable) . . . . .			934,284	2,923,322
Total manufact- ures of . . . . .			\$19,486,001	\$58,115,537

COMPARATIVE STATEMENT OF IMPORTS OF WOOL. 247

COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS OF  
WOOL, ETC. — *Continued.*

EXPORTS OF WOOL AND MANUFACTURES OF.

ARTICLES.	FOREIGN.			
	1919.	1920.	1919.	1920.
	Quantities.	Quantities.	Values.	Values.
WOOL, HAIR OF THE CAMEL, GOAT, ALPACA, AND OTHER LIKE ANIMALS, AND MANUFACTURES OF:				
UNMANUFACTURED—				
Class 1—Clothing, lbs. . . . .	4,995,273	11,063,860	\$2,795,449	\$5,061,136
Class 2—Combing, " . . . .	64,365	552,585	51,689	214,992
Hair of the Angora goat, al- paca, and other like ani- mals, lbs. . . . .	554,103	242,434	273,262	131,263
Class 3—Carpet, lbs. . . . .	74,832	555,700	42,296	232,478
Total unmanufactured . . .	5,688,573	12,414,579	\$3,162,696	\$6,539,869
MANUFACTURES OF—				
Tops, lbs. . . . .	353,429	12,811	\$263,402	\$22,686
Carpets and carpeting—				
Carpets and rugs woven whole, sq. yds. . . . .	31,306	13,915	213,214	173,949
All other, sq. yds. . . . .	3,292	12,720	51,156	15,506
Cloths:				
Lbs. . . . .	3,329	164,912	10,386	326,309
Sq. yds. . . . .	4,493	234,929		
Cloth made of the hair of the Angora goat, alpaca, etc., lbs.,	252	1,620	565	5,349
Dress goods, women's and chil- dren's:				
Lbs. . . . .	7,674	27,460	16,773	89,345
Sq. yds. . . . .	13,988	71,991		
Press cloths of camel's hair, for oil milling purposes, lbs. . .	729	1,500	1,098	2,500
Rags, noils, and other waste, lbs.,	81,932	86,353	48,681	36,014
Wearing apparel . . . . .			28,204	34,623
Yarn, lbs. . . . .	5,407	46,582	4,473	89,929
All other articles . . . . .			12,415	77,114
Total manufactures of . . . .			\$655,367	\$888,524

COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS OF  
WOOL, Etc.EXPORTS OF WOOL AND MANUFACTURES OF. — *Concluded.*

DOMESTIC.				
ARTICLES.	1919.	1920.	1919.	1920.
	Quantities.	Quantities.	Values.	Values.
WOOL, AND MANUFACTURES OF:				
Unmanufactured, lbs. . . . .	2,839,980	9,066,620	\$2,230,629	\$4,974,310
Manufactures of —				
Blankets . . . . .			\$823,544	\$1,257,433
Cloths and dress goods { lbs. . . . .	7,852,785	8,724,743	19,799,723	24,258,584
{ yds. . . . .	12,113,649	11,998,579		
Wearing apparel —				
For men and boys . . . . .			\$10,401,744	\$5,386,441
For women and children . . . . .			4,263,325	2,773,975
Wearing apparel:				
Exported to —				
Belgium . . . . .			\$345,911	\$7,488
France . . . . .			31,153	289,444
Germany . . . . .				400,278
Italy . . . . .			349,312	3,731
Russia in Europe . . . . .			626,520	166,025
United Kingdom . . . . .			1,698,825	126,639
Canada . . . . .			3,070,043	2,006,114
Mexico . . . . .			403,559	626,357
Cuba . . . . .			145,637	347,283
China . . . . .			187,376	51,075
Russia in Asia . . . . .			3,370,194	1,100,383
Other countries . . . . .			4,486,559	3,035,599
Total wearing apparel . . . . .			\$14,665,069	\$8,160,416
Woolen rage, lbs. . . . .	31,476,118	15,132,261	5,538,440	2,812,752
All other manufactures of . . . . .			7,005,992	8,081,817
Total manufactures of wool . . . . .			\$47,832,768	\$44,571,002



WOOL AND MANUFACTURES OF, REMAINING IN WAREHOUSE  
DECEMBER 31, 1919 AND 1920.

ARTICLES.	1919.	1920.	1919.	1920.
	Quantities.	Quantities.	Values.	Values.
WOOL, HAIR OF THE CAMEL, GOAT, ALPACA, AND OTHER LIKE ANIMALS, AND MANUFACTURES OF:				
UNMANUFACTURED —				
Hair of the Angora goat, alpaca, and other like animals (lbs.) . .	2,082,737	2,250,118	\$962,208	\$1,111,297
MANUFACTURES OF —				
Tops (lbs.) . . . . .	9,654	151,600	\$14,784	\$171,906
Carpets and rugs woven whole, sq. yds. . . . .	41,334	210,327	625,693	2,326,705
Carpets and rugs, all other, sq. yds.,	1,493	36,282	4,680	189,535
Cloths:				
Lbs. . . . .	166,632	819,843		
Sq. yds. . . . .	170,624	1,139,062		
Worsted { Lbs. . . . .	31,117	104,030		
Sq. yds. . . . .	55,623	199,450	76,273	276,947
Woolens { Lbs. . . . .	135,515	715,813		
Sq. yds. . . . .	115,001	939,612	185,777	1,470,851
Cloths made of the hair of the Angora goat, etc. (lbs.) . . . . .	7,430	99,433	30,989	263,206
Dress goods, women's and children's:				
Lbs. . . . .	27,038	273,850		
Sq. yds. . . . .	81,439	902,424	111,503	763,518
Wearing apparel . . . . .			73,250	469,669
Yarn (lbs.) . . . . .	78,032	322,942	100,091	652,049
All other . . . . .			35,726	430,276
Total manufactures of . . . .			\$1,258,766	\$7,044,662

## IMPORTS OF WOOL AND MANUFACTURES OF WOOL.

Entered for Consumption, Fiscal Years ended June 30, 1919 and 1920. Quantities, Values, Rates of Duty, and Accruing Duties.

Compiled and prepared from Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce.

ARTICLES.	Rates of duty.	Fiscal Year ended June 30, 1919.					Fiscal Year ended June 30, 1920.				
		Quantities.	Values.	Duties.	Value per unit.	Actual and computed ad valorem rate.	Quantities.	Values.	Duties.	Value per unit.	Actual and computed ad valorem rate.
Wools, hair of the camel, goat, alpaca, or other like animals:											
Class 1—Merino, mestizo, metz, or melle wools, or other wools of merino blood, immediate or remote, down clothing wools, etc., and all wools not hereinafter included in classes two and three—											
Unwashed wool . . . . .	Free . . . .	237,002,749	149,402,288.00	. . . . .	.522 . . . .	. . . . .	304,406,578	152,509,794.00	. . . . .	.501 . . . .	. . . . .
Washed wool . . . . .	Free . . . .	7,472,945	4,812,138.00	. . . . .	.643 . . . .	. . . . .	8,381,100	5,346,679.00	. . . . .	.638 . . . .	. . . . .
Scoured wool (pounds) . . . . .	Free . . . .	33,587,159	28,323,299.00	. . . . .	.843 . . . .	. . . . .	24,909,311	20,070,561.00	. . . . .	.805 . . . .	. . . . .
Total, Class 1 (pounds) . . . . .	Free . . . .	328,062,853	182,537,725.00	. . . . .	. . . . .	. . . . .	337,696,989	177,927,034.00	. . . . .	. . . . .	. . . . .
Class 2—Leicester, Cotswold, Lincolnshire, down combing wools, Canada long wools, or other like combing wools of English blood, and usually known by the terms herein used, and also hair of the camel, Angora goat, alpaca, and other like animals—											
Washed and unwashed . . . . .	Free . . . .	2,074,937	1,288,250.00	. . . . .	.620 . . . .	. . . . .	8,180,823	4,854,752.00	. . . . .	.593 . . . .	. . . . .
Scoured wool (pounds) . . . . .	Free . . . .	37,528	34,371.00	. . . . .	.915 . . . .	. . . . .	119,127	135,879.00	. . . . .	1.114 . . . .	. . . . .
Camel's hair—											
Washed and unwashed (pounds) . . . . .	Free . . . .	329,078	203,839.00	. . . . .	.620 . . . .	. . . . .	1,647,950	1,107,751.00	. . . . .	.708 . . . .	. . . . .
Scoured . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hair of the Angora goat, alpaca, and other like animals—											
On the skin . . . . .	15 per cent,	121,726	33,421.00	a 5,013.15	.274 . . . .	15.00	233,642	78,982.00	a 11,847.30	.338 . . . .	15.00

Not on the skin . . . . .	6,651,425	3,493,223.00	$\alpha$ 523,983.45	.525	15.00	6,645,901	3,711,334.00	$\alpha$ 556,700.10	.558	15.00
Total (pounds) . . . . .	2,441,543	1,526,489.00	. . . . .	. . . . .	. . . . .	9,966,900	6,158,382.00	. . . . .	. . . . .	. . . . .
Total (pounds) . . . . .	6,773,151	3,526,644.00	$\alpha$ 528,996.60	. . . . .	15.00	6,878,643	3,790,316.00	$\alpha$ 568,547.40	. . . . .	15.00
Total, Class 2 (pounds) . . . . .	9,214,694	5,053,113.00	$\alpha$ 528,996.60	. . . . .	. . . . .	16,835,543	9,948,698.00	$\alpha$ 568,547.40	. . . . .	. . . . .
Class 3 — Donskoi, native South American, Cordova, Valparaiso, native Smyrna, Rus- sian camel's hair, etc. —										
Wool, washed and unwashed . . . . .	81,819,135	34,837,076.00	. . . . .	.425	. . . . .	69,894,282	23,016,949.00	. . . . .	.329	. . . . .
Scoured (pounds) . . . . .	1,678,471	1,135,274.00	. . . . .	.676	. . . . .	1,049,522	617,627.00	. . . . .	.588	. . . . .
Camel's hair, Russian, washed and unwashed (pounds) . . . . .	561,303	319,824.00	. . . . .	.570	. . . . .	739,337	499,245.00	. . . . .	.675	. . . . .
Scoured (pounds) . . . . .	25,447	10,944.00	. . . . .	.439	. . . . .	56,271	33,680.00	. . . . .	.598	. . . . .
Total, Class 3 (pounds) . . . . .	84,084,566	36,303,118.00	. . . . .	. . . . .	. . . . .	71,739,412	24,167,501.00	. . . . .	. . . . .	. . . . .
Total wools, etc., unmanufactured . . . . .	414,588,752	220,367,312.00	. . . . .	. . . . .	. . . . .	419,383,301	208,359,917.00	. . . . .	. . . . .	. . . . .
Total wools, etc., unmanufactured . . . . .	6,773,151	3,526,644.00	$\alpha$ 528,996.60	. . . . .	15.00	6,878,643	3,790,316.00	$\alpha$ 568,547.40	. . . . .	15.00
Total wools, etc., unmanufactured . . . . .	421,361,903	223,893,956.00	$\alpha$ 528,996.60	. . . . .	. . . . .	426,271,944	212,043,233.00	$\alpha$ 568,547.40	. . . . .	. . . . .
Manufactures composed wholly or in part of wool, worsted, the hair of the camel, goat, alpaca, or other like animals —										
Wool and hair advanced in any manner, or by any process of manufacture, beyond the washed and scoured condi- tion, not especially provided for . . . . .	8 per cent,									
Total advanced . . . . .	716	939.00	$\alpha$ 75.12	1.313	8.00	30,365	50,471.90	$\alpha$ 4,037.38	1.662	8.00
Rugs, mungo, flecks, nolls, shoddy, and waste —	8 per cent,	716	$\alpha$ 75.12	1.313	8.00	30,365	50,471.90	$\alpha$ 4,037.68	1.662	8.00
Mungo (pounds) . . . . .	Free					166,732	81,867.00	. . . . .	.491	. . . . .
Nolls, carbonized or others (pounds), . . . . .	Free	756,084	972,110.00	. . . . .	. . . . .	3,808,898	4,823,115.00	. . . . .	1.267	. . . . .
Rags and flecks (pounds) . . . . .	Free	697,755	145,462.00	1.285	. . . . .	2,802,819	481,990.00	. . . . .	.172	. . . . .
Shoddies (pounds) . . . . .	Free	7,200	2,142.00	.297	. . . . .	25,536	12,732.00	. . . . .	.498	. . . . .
Wastes —										
Slubbing, ring and garnetted (pounds)	Free	5,822	6,269.00	1.076	. . . . .	21,433	26,088.00	. . . . .	1.215	. . . . .
Top, roving, and card (pounds) . . . . .	Free	10,342	23,955.00	2.320	. . . . .	36,134	59,638.00	. . . . .	1.651	. . . . .
Yarn, thread, burr, and all other wastes, carbonized wool, and wool extract (pounds) . . . . .	Free	253,405	83,444.00	.329	. . . . .	1,290,713	635,110.00	. . . . .	.492	. . . . .
Total rugs, mungo, flecks, nolls, wastes, etc. (pounds) . . . . .	Free	1,730,608	1,253,422.00	. . . . .	. . . . .	8,152,345	6,120,540.00	. . . . .	. . . . .	. . . . .

Imports of Wool and Manufactures of Wool, entered for Consumption, Fiscal Years ended June 30, 1919 and 1920. Quantities, Values, Rates of Duty, and Accruing Duties. — Continued.

ARTICLES.	Rates of duty.	Fiscal Year ended June 30, 1919.					Fiscal Year ended June 30, 1920.				
		Quantities.	Values.	Duties.	Value per unit.	Actual and valorem rate.	Quantities.	Values.	Duties.	Value per unit.	Actual and valorem rate.
Wools, hair of the camel, etc. — <i>Continued.</i>											
Manufactures composed wholly or in part of wool, worsted, etc. — <i>Continued.</i>											
Combed wool or tops, made wholly or in part of wool or camel's hair (pounds) . . . . .	8 per cent,	22,588	Dollars. 26,655.00	Dollars. a 2,132.40	Dolls. 1.78	Pr. cl. 8.00	1,002,801	Dollars. 1,277,009.00	Dollars. a 102,160.72	Dolls. 1.273	Pr. cl. 8.00
Made from the hair of the Angora goat, etc. (pounds) . . . . .	20 per cent,										
Ditto (Philippine Islands) . . . . .	Free . . . .	6	38.00		6.333		110,878	122,670.00	a 24,534.00	1.106	20.00
Roiling or roping . . . . .	8 per cent,										
Free and Dutiable {							242	373.00	a 29.84	1.540	8.00
Total combed wool or tops, etc. (lbs.) {		22,594	26,693.00	a 2,132.40			1,113,921	1,400,052.00	a 126,724.56		
YARNS —											
Made wholly or in chief value of wool (pounds) . . . . .	18 per cent,	471,075	875,659.00	a 157,618.62	1.86	18.00	1,360,702	3,043,050.00	a 547,749.00	2.24	18.00
Made of hair of Angora goat, etc (lbs.) . . . . .	25 per cent,	22,030	64,408.00	a 16,102.00	2.92	25.00	533,975	1,024,863.00	a 256,215.75	1.92	25.00
Total yarns (pounds) . . . . .		493,105	940,067.00	a 173,720.62			1,894,677	4,067,913.00	a 803,964.75		
Blankets composed wholly or in chief value of wool (pounds) . . . . .	25 per cent,										
Ditto (reciprocity treaty with Cuba), (pounds) . . . . .	25-20 per cent,	210,004	247,911.00	a 61,977.75	1.18	25.00	25,063	53,100.00	a 13,275.00	2.12	25.00
Ditto (from Philippine Islands) (lbs.) . . . . .											
Total blankets (pounds) . . . . .		210,004	247,911.00	a 61,977.75	1.18	25.00	25,063	53,100.00	a 13,275.00		25.00
Brads composed of wool . . . . .	60 per cent,		87.00	a 52.20		60.00	3,050	571.00	a 342.60		60.00
Total brads composed of wool . . . . .			87.00	a 52.20		60.00	3,050	571.00	a 342.60		60.00
(Carpets and carpeting —											
Aubusson, Axminster, moquette, and chenille carpets (sq. yds.) . . . . .	35 per cent,	48,689	249,665.00	a 87,382.75	5.13	35.00	108,963	494,877.00	a 173,206.95	4.55	35.00
Brussels carpets (square yards) . . . . .	25 per cent,	122	468.00	a 117.00	3.84	25.00	3,713	7,920.00	a 1,980.00	2.13	25.00

Carpets woven whole for rooms, and Oriental, Berlin, Aubusson, Axminster, and other similar rugs (square yards) . . . . .									
50 per cent.	194,384	968,883.00	<i>a</i> 484,446.50	4.98	50.00	771,922	6,308,901.00	<i>a</i> 3,154,450.50	8.18
20 per cent.	3,273	2,960.00	<i>a</i> 592.00	.90	20.00	4,914	7,716.00	<i>a</i> 1,543.20	1.57
20 per cent.	1,062	1,547.00	<i>a</i> 399.40	1.46	20.00	8,057	10,097.00	<i>a</i> 2,019.40	1.25
30 per cent.	1,126	5,857.00	<i>a</i> 1,757.10	5.20	30.00	92,760	301,113.00	<i>a</i> 90,333.90	3.25
20 per cent.	11,779	13,568.00	<i>a</i> 2,713.60	1.15	20.00	8,339	11,967.00	<i>a</i> 2,303.40	1.44
20 per cent.	150	353.00	<i>a</i> 70.60	2.35	20.00	231	838.00	<i>a</i> 167.60	3.63
30 per cent.	2,484	14,971.00	<i>a</i> 4,491.30	6.02	30.00	6,651	24,633.00	<i>a</i> 7,389.90	3.70
20 per cent.	3,937	4,885.00	<i>a</i> 976.60	1.24	20.00	16,544	38,949.00	<i>a</i> 7,789.80	2.36
Dutiable .	267,006	1,263,165.00	<i>a</i> 582,856.85	4.73	. . .	1,022,812	7,208,407.00	<i>a</i> 43,441,533.95	7.05
Total carpets and carpeting, etc. (sq. yds.)									
Cloths, woollen and worsted —									
Worsted —									
35 per cent.	386,333	754,080.00	<i>a</i> 263,928.00	2.06	35.00	692,733	1,377,029.00	<i>a</i> 481,960.15	1.99
35 per cent.	239,930	188,642	<i>a</i> 100,698.15	3.14	35.00	380,486	279,302	<i>a</i> 184,588.60	3.62
35 per cent.	109,006	287,709.00	<i>a</i> 100,698.15	1.53	35.00	154,464	527,396.00	<i>a</i> 184,588.60	1.89
35 per cent.	554,975	1,041,789.00	<i>a</i> 364,626.15	2.64	35.00	972,035	1,904,425.00	<i>a</i> 666,548.75	3.41
35 per cent.	348,956	1,196,969	<i>a</i> 575,441.65	1.88	35.00	534,950	5,272,637.00	<i>a</i> 1,845,422.95	1.96
35 per cent.	812,752	1,644,110.00	<i>a</i> 575,441.65	2.98	35.00	3,333,757	2,205,070	<i>a</i> 1,845,422.95	3.56
35 per cent.	501,710	808,474.00	<i>a</i> 282,965.90	1.37	35.00	2,377,963	4,164,324.00	<i>a</i> 1,457,513.40	1.58
35 per cent.	402,957	1,788,679	<i>a</i> 858,407.55	2.03	35.00	1,638,357	9,436,961.00	<i>a</i> 3,302,936.35	1.75
35 per cent.	1,215,709	2,452,593.00	<i>a</i> 858,407.55	2.00	35.00	5,711,720	11,341,386.00	<i>a</i> 3,969,485.10	2.54
35 per cent.	2,343,654	3,494,382.00	<i>a</i> 1,223,033.70	1.37	35.00	3,843,427	6,683,755	<i>a</i> 3,302,936.35	1.65
35 per cent.	1,564,645	415,665.00	<i>a</i> 166,266.40	2.02	35.00	4,378,377	819,372.00	<i>a</i> 327,748.80	2.46
40 per cent.	212,786	169.00	<i>a</i> 42.25	1.49	40.00	317,506	5,658.00	<i>a</i> 1,414.50	1.70
25 per cent.	371	3,910,217.00	<i>a</i> 1,389,342.35	2.23	25.00	27,772	12,166,416.00	<i>a</i> 4,298,648.40	2.59
Dutiable .	1,777,802	3,910,217.00	<i>a</i> 1,389,342.35	2.20	35.6	4,723,655	12,166,416.00	<i>a</i> 4,298,648.40	2.58
Total cloths (pounds)									
Made of hair of Angora goat, etc. (pounds) . . . . .									
40 per cent.	212,786	169.00	<i>a</i> 42.25	1.95	40.00	317,506	819,372.00	<i>a</i> 327,748.80	2.58
25 per cent.	371	3,910,217.00	<i>a</i> 1,389,342.35	.46	25.00	27,772	5,658.00	<i>a</i> 1,414.50	40.00
Dutiable .	1,777,802	3,910,217.00	<i>a</i> 1,389,342.35	2.20	35.6	4,723,655	12,166,416.00	<i>a</i> 4,298,648.40	25.00
Total cloths (pounds)									
Made in chief value of cattle or horse hair, n.s.p.f. (pounds) . . . . .									
25 per cent.	371	3,910,217.00	<i>a</i> 1,389,342.35	.46	25.00	27,772	5,658.00	<i>a</i> 1,414.50	25.00
Dutiable .	1,777,802	3,910,217.00	<i>a</i> 1,389,342.35	2.20	35.6	4,723,655	12,166,416.00	<i>a</i> 4,298,648.40	35.3

*Imports of Wool and Manufactures of Wool, entered for Consumption, Fiscal Years ended June 30, 1919 and 1920. Quantities, Values, Rates of Duty, and Accruing Duties. — Continued.*

ARTICLES.	Rates of duty.	Fiscal Year ended June 30, 1919.					Fiscal Year ended June 30, 1920.				
		Quantities.	Values.	Duties.	Value per unit of quantity.	Actual and computed ad valorem rate.	Quantities.	Values.	Duties.	Value per unit of quantity.	Actual and computed ad valorem rate.
Wools, hair of the camel, etc.— <i>Continued.</i>											
Manufactures composed wholly or in part of wool, worsted, etc.— <i>Continued.</i>											
Dress goods, women's and children's, coat linings, Italian cloths, bunting, and goods of similar description —											
Bunting (square yards) . . . . .	{ 35 per cent. }	288,024	203,236.00	<i>a</i> 71,132.60	<i>Dolla.</i> .71	<i>Pr. ct.</i> { 35.00 }	7	53.00	<i>Dollars.</i> <i>a</i> 18.55	<i>Dollars.</i> 7.57	<i>Pr. ct.</i> { 35.00 }
Coat linings and Italian cloths (square yards) . . . . .	{ 35 per cent. }	447,831	173,257.00	<i>a</i> 60,639.95	<i>Dolla.</i> .39	<i>Pr. ct.</i> { 35.00 }	4	517,075.00	<i>a</i> 180,976.25	<i>Dollars.</i> 13.25	<i>Pr. ct.</i> { 35.00 }
Other dress goods —		105,607			<i>Dolla.</i> 1.64		1,967,561			<i>Dollars.</i> .48	
Cotton warp (square yards) . . . . .	{ 35 per cent. }	250,192	149,154.00	<i>a</i> 52,203.90	<i>Dolla.</i> .60	<i>Pr. ct.</i> { 35.00 }	227,110			<i>Dollars.</i> 2.18	<i>Pr. ct.</i> { 35.00 }
All other (square yards) . . . . .	{ 35 per cent. }	67,669	220,956.00	<i>a</i> 77,334.60	<i>Dolla.</i> 2.20	<i>Pr. ct.</i> { 35.00 }	564,837	308,093.00	<i>a</i> 128,832.55	<i>Dollars.</i> .65	<i>Pr. ct.</i> { 35.00 }
Total dress goods (square yards) (pounds) . . . . .	{ 35 per cent. }	216,148			<i>Dolla.</i> 1.02	<i>Pr. ct.</i> { 35.00 }	160,092	1,705,646.00	<i>a</i> 596,976.10	<i>Dollars.</i> 2.30	<i>Pr. ct.</i> { 35.00 }
		73,388			<i>Dolla.</i> 3.91		1,639,972			<i>Dollars.</i> 1.04	
Total dress goods (square yards) (pounds) . . . . .	{ 35 per cent. }	1,202,195	746,693.00	<i>a</i> 261,311.05	<i>Dolla.</i> . . .	<i>Pr. ct.</i> { 35.00 }	699,107			<i>Dollars.</i> 2.85	<i>Pr. ct.</i> { 35.00 }
		339,812					3,252,377	2,590,867.00	<i>a</i> 906,803.45	<i>Dollars.</i> . . .	<i>Pr. ct.</i> { 35.00 }
Felts not woven (pounds) . . . . .	35 per cent.	14,951	28,162.00	<i>a</i> 9,856.70	<i>Dolla.</i> 1.88	<i>Pr. ct.</i> { 35.00 }	70,147	41,324.00	<i>a</i> 14,463.40	<i>Dollars.</i> .59	<i>Pr. ct.</i> { 35.00 }
Total felts . . . . .	35 per cent.	14,951	28,162.00	<i>a</i> 9,856.70	<i>Dolla.</i> 1.88	<i>Pr. ct.</i> { 35.00 }	70,147	41,324.00	<i>a</i> 14,463.40	<i>Dollars.</i> .59	<i>Pr. ct.</i> { 35.00 }



Flannels — Wholly or in chief value of wool — Valued at not above 50 cents per pound (pounds) . . . . .	8	4.00	a 1.00	.50	25.00	1,500	698.00	a 174.50	.44	25.00
Valued at above 50 cents per pound (pounds) . . . . .	74,590	112,840.00	a 33,852.00	1.51	30.00	329,201	781,826.00	a 234,547.80	2.37	30.00
Total flannels, etc. . . . .	74,598	112,844.00	a 33,853.00	1.51		330,791	782,524.00	a 234,722.30	2.37	
Knit fabrics (not wearing apparel), wholly or in chief value of wool (pounds) . . . . .	5,216	5,681.00	a 1,988.35	1.09	35.00	3,823	11,196.00	a 3,918.60	2.92	35.00
Total knit fabrics (pounds) . . . . .	5,216	5,681.00	a 1,988.35	1.09	35.00	3,823	11,196.00	a 3,918.60	2.92	35.00
Laces, embroideries, etc., of wool — Laces, coach, carriage, and auto- mobile . . . . .	15	89.00	a 41.40	4.60	60.00					
Veils and veillings (yards) . . . . .	84	119.00	a 71.40	1.42	60.00	b	11.00	a 6.60	b	60.00
All other laces, lace articles, em- broideries, nets, etc. . . . .		50,388.00	a 30,232.80		60.00		68,204.00	a 40,922.40		60.00
Total laces, etc. . . . .		50,576.00	a 30,345.60		60.00		68,215.00	a 40,929.00		60.00
Pushes, velvets, and other pile fabrics, etc., made of wool (pounds) . . . . .	1,713	7,305.00	a 2,922.00	4.23	40.00	13,261	29,327.00	a 11,730.80	2.21	40.00
Manufactures in chief value of same . . . . .	1,289	4,655.00	a 1,854.00	3.60	40.00		19,575.00	a 7,830.00		40.00
Pushes and other pile fabrics made from the Angora goat hair, etc. (pounds) . . . . .	4,561	8,490.00	a 3,820.50	1.86	45.00	6,031	17,907.00	a 8,058.15	2.97	45.00
Articles made wholly or in chief value thereof . . . . .	732	564.00	a 253.80	.77	45.00		9,392.00	a 4,226.40		45.00
Total pushes and other pile fabrics, etc. value thereof . . . . .	8,295	20,994.00	a 8,850.20			b	76,201.00	a 31,845.35		
Press cloth of camel's hair for oil mill- ing purposes, etc. . . . .						31,175	39,048.00		1.25	
Other n.o.p.f. per pound . . . . .					10.00					10.00
Total press cloth of camel's hair, etc. . . . .						31,175	39,048.00			

*Imports of Wool and Manufactures of Wool, entered for Consumption, Fiscal Years ended June 30, 1919 and 1920. Quantities, Values, Rates of Duty, and Accruing Duties. — Continued.*

ARTICLES.	Rates of duty.	Fiscal Year ended June 30, 1919.					Fiscal Year ended June 30, 1920.				
		Quantities.	Values.	Duties.	Value per unit of quantity.	Actual and computed ad valorem rate.	Quantities.	Values.	Duties.	Value per unit of quantity.	Actual and computed ad valorem rate.
Wools, hair of the camel, etc. — <i>Continued.</i>											
Manufactures composed wholly or in part of wool, worsted, etc. — <i>Continued.</i>											
Wearing apparel: Clothing, ready-made, and articles of wearing apparel, made up or manufactured wholly or in part, composed in chief value of wool —											
Gloves and mittens valued at not more than \$1.20 per dozen pairs (dozen pairs) . . . . .	30 per cent.	101	107.00	Dollars. a 32.10	Dolls. 1.06	Pr. et. 30.00	b	Dollars. 170.00	Dollars. a 51.00	Dolls. b	Pr. et. 30.00
Valued at more than \$1.20 per dozen pairs (dozen pairs) . . . . .	40 per cent.	65,993	597,209.00	a 238,883.60	9.05	40.00	20,455	95,021.00	a 38,008.40	4.65	40.00
Hats of wool (number) . . . . .	35 per cent.	38,045	39,797.00	a 13,928.95	1.05	35.00	143,246	138,536.00	a 48,487.60	.97	35.00
Knitted articles n.s.p.f. (pounds) . . . . .	35 per cent.		298,565.00	a 104,497.75		35.00		141,428.00	a 49,499.80		35.00
Ditto (reciprocity treaty with Cuba), (pounds) . . . . .	35-20 per cent.							12.00	b		35-20.00
Shawls, knitted or woven (pounds), stockings, hose, and half hose made wholly or in part of wool n.s.p.f., made on knitting frames (dozen pairs) . . . . .	35 per cent.		3,243.00	a 1,135.05		35.00		12,960.00	a 4,536.00		35.00
Serivaged, fashioned, narrowed, etc., finished or unfinished, valued at not more than \$1.20 per dozen pairs (dozen pairs) . . . . .	20 per cent.					20.00	1,367	6,955.00	a 1,387.00	5.08	20.00
Valued at more than \$1.20 per dozen pairs (dozen pairs) . . . . .	30 per cent.	4	4.00	a 1.20	1.0	30.00	191	213.00	a 63.90	1.11	30.00
Other clothing, ready-made, and articles of wearing apparel, made up or manufactured wholly or in part (pounds) . . . . .	40 per cent.	143,331	825,763.00	a 330,305.20	5.76	40.00	149,011	1,193,373.00	a 477,349.20	8.01	40.00
	35 per cent.		2,646,216.00	a 926,175.60		35.00		2,492,863.00	a 872,502.05		35.00

[illegible]

*b* Data Incomplete.

Calculated.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS  
OF AUGUST 24, 1912.

Of Bulletin of the National Association of Wool Manufacturers, published quarterly, at Boston, Massachusetts, for April, 1921.

STATE OF MASSACHUSETTS }  
COUNTY OF SUFFOLK } ss.

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Paul T. Cherington, who, having been duly sworn according to law, deposes and says that he is the Editor of the Bulletin of the National Association of Wool Manufacturers. and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

*Publisher*, National Association of Wool Manufacturers, 50 State Street, Boston, Mass.

*Editor*, PAUL T. CHERINGTON, Secretary National Association of Wool Manufacturers.

*Managing Editor*, none.

*Business Managers*, none.

2. That the owners are (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock):

The National Association of Wool Manufacturers, a voluntary association without capital stock, three principal officers being: *President*, John P. Wood, Philadelphia, Pa.; *Vice-Presidents*, William M. Wood, Boston, Mass.; George H. Hodgson, Cleveland, O.; Franklin W. Hobbs, Boston, Mass.; *Secretary and Treasurer*, Paul T. Cherington, Boston, Mass.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are (If there are none, so state):

There are no stockholders or bondholders, mortgagees or other security holders.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner: and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is \_\_\_\_\_  
(This information is required from daily publications only.)

PAUL T. CHERINGTON.

Sworn to and subscribed before me this 6th day of April, 1921.

(SEAL)

WILLIAM R. BURKE.

(My commission expires January 16, 1925.)

**BULLETIN**  
OF THE  
**National Association of Wool Manufacturers**  
A QUARTERLY MAGAZINE  
DEVOTED TO THE INTERESTS OF THE NATIONAL WOOL INDUSTRY.

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VOL. LI.]

BOSTON, JULY, 1921.

[No. III.]

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AN ADDRESS TO SPINNERS.

CHANGES IN THE INDUSTRY BROUGHT ABOUT BY WAR,  
FASHION AND OTHER CAUSES.

By MR. JOHN P. WOOD,

*President of the National Association of Wool Manufacturers.*

You have often been told that the world production of wool does not keep pace with the increase in population, and that the per capita allowance is steadily diminishing. Having heard this interesting piece of information so frequently during the past 15 or 20 years you doubtless wonder why a shortage of supply has not developed by this time.

Well, what do you think would be the state of supply by this time if the clothing habits of the people had undergone no change?

DECREASED WEIGHT OF FABRICS.

Within the memory of most of us the average weight of fabrics for men's winter suitings was 20 ounces. Now it is about 13. Cloths for spring wear habitually weighed 12 to 14 ounces. Now the average is probably less than 10 ounces. Heavy woolen underwear for winter was the rule. That has been replaced largely by lightweight merino made mostly of cotton, and many persons wear the same light cotton undergarments in winter as in summer.

The once famous balmoral cloth used for underskirts, which gave continuous employment to many hundreds of narrow looms and consumed tons of wool, is as extinct as the dinosaur. I am inclined to suspect that nothing else has taken

its place; if I am mistaken as to that, I am sure that nothing made of wool is used in its stead.

A generation ago women habitually used for street and day wear dresses made of woolen or worsted stuffs. These have been to a very great extent superseded by silk dresses or by silk or cotton blouses with woolen skirts, and the ample dimensions and trailing trains of the skirts of that period have shrunk almost to the vanishing point.

These familiar changes of custom and fashion have offset, thus far, the lessened production of wool. Imagine, if you can, how much more wool would be required to clothe our present population if to-day's garments were of the same kinds, weight, and amplitude as those of thirty years or more ago.

But it does not seem likely that any further reduction in consumption can be caused by such changes. On the contrary, the turning wheel of fashion already gives indications of increased requirements for women's wear. An example is in the revival of the accordion pleated skirt which requires twice the yardage and weight of wool of the patterns lately in vogue.

Wool production temporarily stimulated by the war is now decreasing at a rate greatly accelerated by the losses and low prices consequent upon deflation of war values. From all of the principal wool growing countries comes the same news of increase in the number of sheep slaughtered, and of the sacrifice of breeding stock. While this reduction of flocks will cause some decrease in the production of wool during the current year, the full measure of the diminution will not be realized in the wool markets until the following years.

While production declines, population continues to expand in numbers, and by reason of wider diffusion of prosperity, an ever increasing proportion of the people are able to buy *new* clothing of wool.

#### A CHANGED WOOL PRODUCTION.

But it is not merely the opposite trends of the totals of wool production and consumption that are of startling significance. Of added importance are the remarkable changes that have oc-



curred in the ratios of fine to crossbred wool production, and consumption.

Fifteen years ago probably 70 per cent of the wool grown in the United States was of the quality of half-blood or finer. As recently as 1910 it was estimated at 69 per cent.

By 1917 the substitution of crossbred sheep for merinos had progressed so far that the percentage of half-blood and finer had declined to about 54 per cent. In the four years that have since elapsed it has declined to considerably less than half of the total clip.

According to a British Government authority in 1916—80 per cent of the Australian clip was of merino grades. By 1920 this seems to have declined to 66 per cent.

In South America similar substitution of the mutton breeds for merinos has been evident. The total world production of fine wool is, therefore, very much less than it was a few years ago.

Coincident with this decrease in the production of fine wools, the use of these wools has, for a variety of reasons, enormously increased.

The extremely high prices which prevailed for clothing were in such large part due to the costs of labor and distribution that the difference between the price of suits made of fine wool and those of cross-bred wool was comparatively inconsequential. At prices so nearly alike consumers generally preferred those of the finer appearing cloth that for several years past there has been almost no demand for men's clothing made of crossbred wools.

#### FASHIONS CALL FOR THE USE OF FINE WOOLS.

The prevailing fashion in worsted goods for women's wear has also happened to favor the use of fine wools, a vast yardage of tricotines and similar dress goods fabrics has supplanted the coarser serges and carded woolen cloths formerly popular.

The result of this increased consumption of grades now grown in decreased supply is clearly evident in the relatively small proportions of fine wool included in the surplus stocks. Of the unshipped Australian wool it is reported that not over

30 per cent is of merino grades as against a 66 per cent, recently produced, and 80 per cent grown no longer than five or six years ago.

Of the accumulated stocks in South America and South Africa, the proportion of fine wools reported is much less.

As for the stocks in the United States, you who are constantly inspecting them for the purpose of buying, can answer better than I.

With these separate facts, you are, of course, thoroughly familiar. It is when assembled together that their presentation becomes astonishing.

The tendencies which I have discussed may only manifest themselves decisively in a longer period. Month to month changes in market conditions are influenced one way and another by many cross currents of temporary nature, but their influence may be very great for a brief period.

#### ABNORMAL STOCKS OF WOOL DUE TO TEMPORARY CAUSES.

A notable example is the present excess in the aggregate stocks of wool. From 1916 to 1918 there was a general expectation of a wool famine. The wastage of wool in war was known to be very great, and the estimates were wildly exaggerated, in consequence of which some very foolish governmental policies were adopted.

But the real wastage was so great that if wool could have moved freely from the countries of origin to those of manufacture, there would be no surplus wool problem to puzzle us now. But unforeseen difficulties of transportation, and the unexpectedly long delay in the resumption of manufacture in Central Europe, much more than offset the actual wastage of wool for military purposes. And to the surprise of everyone concerned, instead of a wool famine there is a plethora of wool in the aggregate.

So it may be temporarily with the facts I have told enumerated; counteracting influences may for a time delay the consequence.

Leaving these interesting wool particulars for your more convenient consideration, let me now speak briefly of values and wage rates.

## THE LESSENED PURCHASING POWER OF THE DOLLAR.

We become so habituated to measuring values in terms of money that although we know the monetary unit itself changes in value, we quite overlook the fact, when measuring values of other things.

Any intelligent person can tell you that the dollar has lately had only about half the value it had in 1914. But the intelligent men who direct the municipal affairs of this great metropolis insist that to charge two more pennies for street car fare, would be an unwarrantable increase in the cost of municipal transportation and an imposition upon the public. Whereas anything short of doubling the rate is actually a reduction in the price of the service. Those intelligent newspapers who join the popular outcry against any advance in the nominal price of public services, have at least a sufficient grasp of elementary truth to understand the changed value of the penny as a measure of the cost of *newspapers*.

When the supply of eggs is greatly increased and the supply of dollars remains constant the price of eggs must obviously decline. But unfortunately for sound economic and financial thinking it is not so obvious that when the supply of eggs remains constant and dollars are more abundant the price of dollars—measured in eggs—must go down.

## CAUSES OPERATING DURING THE WAR.

During the war both causes were operating upon the prices of wool and manufactures of wool, the compound effect being to increase the nominal prices to four times what they were in 1914. In the past year one of those causes—shortness of supply of wool fabrics, yarns, and new wool—has disappeared, for the present at least, with the result that nominal prices have fallen. The other cause—the cheapened value of the dollar—continues. And in trying to estimate future price tendencies it is necessary to consider whether the decline that has occurred may not have exceeded that part of the rise in prices which was caused by scarcity of wool and products of wool, that is to say whether the present price level, which is measured in much cheaper dollars than those in use in 1914, may not be much lower than it can possibly remain.

## FACTS TO BE KEPT IN MIND WHEN CONSIDERING NOMINAL VALUES.

In considering this subject of nominal values it is necessary to keep in view these facts.

1. The value of money—i.e. its purchasing power— has been progressively declining for centuries. This is not merely, as some suppose, because the stocks of gold and silver, which constitute the foundation of the modern monetary system, have increased. It is because the total wealth of the world increases, the savings of each generation's labor being added to what remains of the savings of those that have gone before. So that, in a very real sense, we are "the heirs of all the ages."

This decline has not been constant and uniform, being influenced by temporary conditions which sometimes retard and sometimes accelerate the general decline.

2. During these centuries the living conditions of wage earners have greatly improved not only absolutely, but also relatively.

The improvement in living conditions also proceeds at ever varying rates of progress. There have been long periods in which the movement has been so slow as to be almost imperceptible, due to many causes which it is apart from our present purpose to discuss. At other times, especially in periods of inflation like that through which we have lately been passing, the progress is much more rapid. Improved standards of living imply higher wages.

We have, therefore, two factors operating to enhance wages. One, the decreasing value of money, effects a nominal, but not a relative, increase; the other, the improvement in living conditions, effects a relative as well as a nominal increase.

## CHANGES IN MONEY VALUE AND RATES OF WAGES.

A few illustrations of changes in the value of money and in rates of wages, may be of passing interest.

In the early history of woolen manufacture the only processes carried on as other than household industries were those of dyeing and fulling.

At Bradford, England, about the year 1340 the local fulling mill, with the water privilege necessary for its operation, was

let at an annual rental of ten shillings. In 1353 a new agreement was made at 40 pence new rental per annum, but for this increase of 80 cents in the yearly rent the lessees were given the exclusive privilege of fulling for the manor of Bradford, and it was stipulated that no strange fuller enter within the town and liberty of the Court of Bradford, "neither shall any fulling be done outside the said town." The rent of the fulling mill, all charges for water and a monopoly of the fulling business for Bradford, at a cost of 13 shillings and four pence a year, say about \$3.30!

In 1352 Walter Lister (his name was Lister because he was what we call a dyer but then known as a lister—Walter, the Lister) was granted a monopoly of dyeing in Bradfordale upon the payment of four shillings the year. Twelve years earlier he had been arrested for using the office of dyer without a license, and for that offense there was imposed upon him a fine of the utterly ruinous sum of thruppence.

From a recent article in the *Manchester Guardian* it appears that about the year 1280 the wage scale for some of the building trades in the vicinity of Manchester were:—

Common labor	8 to 10d. a week
Carpenters, in winter	20d.      "    "
Carpenters, in summer	24d.      "    "

The most highly paid workers were the masons, some of whom received as much as 2 shillings and 6d. a week.

#### MORE EXAMPLES OF WAGES PAID.

In the next three centuries, increase there was, but it was slight, for there had been but little if any improvement in living conditions.

In 1638 spinners earned from 2d. to 3d. per day.

In 1647 wages of cloth workers in Bradford were :

All classes 4d. to 8d. per day.

If engaged by the year :

Skilled workers £3

Common    "    £2 10d.

These yearly rates were probably in addition to an allowance of meat and drink.

It has been estimated that between 1570 and 1670 wages in England doubled. The rates of the earlier year must therefore have been much lower than those quoted for 1647.

It would be interesting to compare the wages paid in the woolen industry at frequent intervals, from then to now, but I cannot take so much of your time. Let us skip forward, therefore, nearly two centuries, and across the sea to Massachusetts in 1828, just before the beginning of the great industrial and transportation development of the 19th Century. In that year, Mr. Marland, whose great-grandsons are now engaged in your branch of industry, testified before a Congressional Committee that woolen wages were for

Men	\$6 per week
Women	\$2.25 to \$2.50 per week
Boys and Girls, 8 to 12 years	\$1.50 per week

and the hours of work were 72 per week.

From 1828 until 1861 the progress of wage increase was slow and intermittent, and included a period of reaction due to adverse tariff legislation.

But the civil war period and the years immediately following that war witnessed a large increase and by 1869 the wages probably averaged twice as much for an 11 hour day as they had been for a 14 hour day a couple of decades earlier.

By the time the McKinley tariff was in operation there was a further gain of upwards of 20 per cent.

Then in that blank period from 1893 to 1897 there was a temporary recession, all of which was regained under the Tariff act of 1897.

From 1900 to the beginning of the war increase of weekly earnings continued to progress at a moderate rate, and the rates of pay or labor cost advanced even much more than weekly earnings because of successive reductions in the hours of work. I mention these former rates of wages by way of warning to those who are expecting prices to return to "normal."

What are normal wages? Those of 1914, 1890, 1860, 1828, 1647, or 1280? If we hark back to any former time for our



standard, why to one rather than another? Must we not recognize that there must now be a new normalcy for wages, not of course that consequent upon abnormal war conditions, but as surely, not that of the years immediately preceding the war.

If, as is confidently asserted, 85 per cent of the cost of finished cloth consists of the wages of direct and indirect labor, the inference as to future prices of wool, yarn, and fabrics seems tolerably clear.

3. Almost the entire price of any finished commodity represents wages. The labor cost of woolen fabrics is just as much the labor of the farmer who grows the feed of the sheep, of the coal miner who digs the coal with which the mill steam power is generated, of the trackman, and railroad crews who provide for transportation, as of the weaver who operates the loom.

Here then is something more for you to ponder over.

If the price of wool in cents per pound is as low to-day as in 1914, it is really priced at half the value it was in 1914 because of the lower value of money.

If wages are permanently on a higher relative, as well as nominal, value, will it not cost much more to produce wool and to manufacture it than before the war? All this would seem to indicate two reasons will exist for permanently higher prices of wool, when present surplus stocks have been absorbed, viz., the permanently lower purchasing value of money, and the permanently higher relative rates of wages; and the decreasing per capita of wool productions.

These things are as true of manufactures of wool as of the raw materials.

Once again I must mention that the price of woolen and worsted yarns will not necessarily advance to-morrow, next week, or next month. I am not giving a tip on the market; but am only suggesting some thoughts from which you can meditate upon the prices for next year and the years following.

And there may be wisdom in reasoning a little bit about the relationship of present prices with those of 1914.

## IMPROVEMENTS IN TEXTILE MANUFACTURING PROCESSES MADE POSSIBLE BY UTILIZATION OF THE METAL DURALUMIN.

By WILLIAM D. HARTSHORNE.

DURALUMIN, as its name seems to imply, combines properties of "durability" and lightness which have been demonstrated by the writer to afford a means of successfully advancing the textile arts beyond anything as yet otherwise accomplished. Some of the methods of using it to secure and maintain an advantageous moisture content will be briefly indicated after the principles involved have been considered. These principles relate not only to the properties of the metal itself, but to the properties of textile fibres.

In the author's papers, previously published,\* relating to the moisture content of textile materials, the chief emphasis was naturally placed upon the growing recognition of the commercial necessity of a proper understanding of the conditions of atmospheric and temperature exposure affecting the weight of any such material at the time of sale; especially as relating to transactions between one locality and another differing materially in natural humidity and temperature changes.

While this question of weight as a selling value was the most obvious, it was not the only commercial feature pointed out as of great importance. In all the major processes connected with worsted and cotton manufacture, the element of temperature as well as quantity of moisture content, upon which both the strength and elasticity of the thread or fabric depend, is of the highest importance. Moreover the relationship of both these elements in and to the immediately surrounding atmosphere, when smoothness and evenness of prod-

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\* In addition to the author's publications listed by dates in an article to appear in the October number of this Bulletin, see also the following, applying directly to the subject of this paper:

Hygroscopic Qualities of Wool, Vol. XL (1910), page 209.

The same continued, Vol. XLI (1911), page 108.

Worsted Mill Conditions in England, Vol. XLIV (1914), pages 139-150.

uct is desired, should be such that *the fibre will be losing or at least tending to lose moisture while undergoing draft, receiving twist, or being stretched*. The fact has been thoroughly established that when a minimum twist is desired as an element of quality in a worsted thread spun on the Bradford System, it can only be obtained without loss of both quality and quantity of product, by carefully securing and maintaining such a losing condition. This is most emphasized in long staple wools of the cross-bred or lustre type. Too much moisture in the air from whatever source can not be fully compensated for by increase in oil content or diminished speed. To keep frames going the usual remedy is to increase the twist to the detriment of quality as well as quantity. On the other hand, it has been shown that with sufficient moisture in the roving, evenly introduced and efficiently maintained or renewed, a top of short staple wool as combed without oil by the French or Heilmann system can be spun on frames of the cap or ring type in economical competition with the best mule spinning.

While this condition of moisture content is more easily proved essential in worsted spinning as above outlined, the author's investigations lead him to believe that the tendency is of pronounced importance with cotton as well, not only in spinning but also at other critical stages of its manufacture. These latter observations have been confirmed by other investigators, but the detrimental effect of too much moisture in the atmosphere in cotton manufacturing is largely obscured by other conditions of the fibre itself, especially in the twist factor usually thought necessary for good cotton spinning.

Without dwelling upon this part of the subject more at this time, the author desires to call attention to a kindred subject affecting the manufacturing processes following the spun or twisted yarn in both the knitting and weaving trade. His attention was called to the importance of the subject to the knitter by the conditions found in a first class knitting concern making worsted and woolen sweaters. The winter of 1920, owing to the extreme cold, made it difficult to avoid an atmosphere relatively *too dry* within doors for maintaining sufficient moisture-produced elasticity in the yarns as used,

to say nothing about flyings, to overcome the tendency to break in the needles with a consequent increased number of holes left in the web in spite of the greatest care of the knitter. In the class of goods this concern was making, these holes, being economically unrepairable, made a heavy loss. It was easy to produce a temporary benefit by placing the cones, as wound for the knitter, in the steaming boxes used for other purposes, but the penetration of the moisture from the outside was not only very slow and could not be depended upon to reach the interior portions of the cone, but very quickly rendered the paper holder itself a pulpy mass useless for any further service. This experience served to show to the owners the importance of the conditions required, but the problem remained to produce them economically and without detrimental effects.

#### THE INTRODUCTION TO THE USE OF DURALUMIN.

By using a perforated copper cone, nickel plated to prevent contact of the dyed yarns with the copper, which contact is well known to change the shade of the majority of colors, the result was satisfactorily accomplished but at much too great cost, both for the metal cones themselves and for the necessary frequent replating. Numerous other substances were tested by the writer and found to fulfil the purpose as regards durability and lack of detrimental effect upon colors, but weight of material, difficulty of manufacture, and cost rendered most of them quite impracticable.

Among those tested, however, was a comparatively new metal, an aluminum alloy known as Duralumin, now being developed in this country for many mechanical purposes, especially in connection with the automobile industry, where its lightness, strength, and hardness after heat-treatment, with its non-rusting properties, have been found very useful.

Cone holders of this material, though also difficult to make, have been successfully manufactured in several sizes to fit the standard makes of cone winding machinery and the results have proved exceedingly satisfactory where proper precautions have been taken to maintain the moisture content necessary to produce the desired state of elasticity in the

thread. This has been done, by a simple cold storage arrangement of taking care of the steamed cones, in a way to avoid any necessity for having a humidity or temperature condition of the atmosphere that might be uncomfortable to the operative or detrimental to the knitting machinery. The finished Jumbo size of cone as now made weighs only one-fifth more than the usual corresponding paper cone, and its properties are such as to insure its long life even under hard mill usage and at a cost which has been estimated would make it ultimately more economical than the best paper cones yet produced.

A still more recent use for this remarkable metal has been in the development of perforated worsted and cotton spinning bobbins. The results are very important as related to the durability of this type of bobbin as compared to the ordinary wooden bobbin, the best enamelled bobbin, or metal tipped wooden bobbins, wherever an exposure to water, steam or a moist atmosphere is considered desirable for any purpose. This is especially note-worthy for hard twisted yarns of the voile type, either cotton or worsted, where its properties admit of special methods of setting more perfect than steaming alone has been found to be, and at very much less cost both for the setting method itself and avoidance of loss due to the deteriorating effect of heat and moisture on all wooden bobbins, however expensively protected.

As a simplified spinning, winding, and weaving form of bobbin, the perforations serve the purposes of the steps, ribs, or rings usually needed, when using a filling wind, to prevent soft noses and sluffing off in the shuttle.

In carrying out this idea, it has been found possible, and may prove highly practicable, to standardize filling bobbins, within certain limits as to diameter and length of barrel, which may be used interchangeably for either cotton or worsted spinning, quilling or cheese winding; the same bobbin when of appropriate length and diameter, being available for use upon the several types of cotton ring spinning frames, worsted cap or ring spinning frames, and for every kind of shuttle. Even the largest diameter required for spinning worsted or cotton yarns of special classes can now be made

at an undoubtedly economical cost considering the wastage on wooden bobbins and the advantages attainable in both lessening cost of yarn production and the improved quality of the product.

Finally: From the facts presented and the principles laid down in this paper, it is evident that an opportunity for economical benefit can be secured by the use of this metal in many other forms of textile holders besides those above discussed, even loom beams, depending only on the investment cost, which for the smaller articles is already assured to be within economical limits.

Its lightness, rust resisting properties, great strength, resilience, and hardness after heat-treatment, together with the fact that it has no detrimental effect upon the color of the yarn already dyed, coming in direct contact with it, under any conditions so far tried, make it an ideal material for any such purpose.

NOTE:—Patent applications have been filed for both the processes involved, whatever the material used as holders, and also for corresponding holders made of the specific material Duralumin.



## WAS THERE NO PROPAGANDA FOR THE FRENCH-CAPPER BILL?

### A COMPLETE REFUTATION OF SOME OF THE TESTIMONY BEFORE THE SENATE SUB-COMMITTEE.

WHEN testifying before the Sub-Committee of the Senate Committee on Interstate Commerce on June 1, Mr. Alexander Walker, Vice-President of Strong, Hewat & Co. and President of the National Sheep and Wool Bureau, presented a long list of resolutions which he claimed indicated the great interest taken by the consuming public in the French-Capper compulsory branding bill. After the list was read into the record, the following conversation occurred between Senator James A. Watson, of Indiana, Chairman of the Sub-Committee, and Mr. Walker.

Senator Watson: Were these resolutions largely passed within the last three or four months?

Mr. Walker: Largely passed within the last six months.

Senator Watson: How does it come there was such widespread action in all sections of the Union simultaneously?

Mr. Walker: Mr. French introduced the bill in the House a year ago and since that time the resolutions have been coming from all parts of the United States.

Senator Watson: It was not the result of propaganda?

Mr. Walker: It was not the result of propaganda in any *way, shape, or manner*.<sup>\*</sup> Mr. Chairman, I will demonstrate that to you by taking up a little of your time, if I may, on the matter of public sentiment. Editorials and news items in leading publications throughout the United States have also expressed disapproval of permitting shoddy to be sold unidentified and permitting the people to believe unidentified shoddy to be virgin wool, and have urged Truth in Fabric legislation, making it compulsory to stamp cloth and to identify shoddy. I have appended to this brief a booklet containing a few of the many editorials and press clippings in support of the Truth in Fabric movement which have appeared.

Commenting on this surprising statement by Mr. Alexander Walker, Mr. John P. Wood later told the Sub-Committee that it was not frank to say in reply to Senator Watson's inquiry

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<sup>\*</sup>Stenographer's notes of Testimony, Volume I, p. 31.

that there was absolutely no propaganda behind the various resolutions cited. While he did not find fault with "propaganda for a cause in which one sincerely believes, which he considered justifiable," Mr. Wood submitted to the Committee "as bearing directly upon this subject of propaganda and supplying also an answer to the question asked by the chairman on the first day of these hearings, copies of two letters that have been widely circulated by the Sheep and Wool Bureau. One was written by Mr. French to the Secretary of the Bureau, and the other written by Mr. Briggs\* to accompany the copies of Mr. French's letter." Mr. Wood added that he introduced them not for criticism, but the Committee "may be better able to evaluate the correspondence, resolutions and editorials to which reference has been made." The first letter was addressed to Mr. George D. Briggs and signed by Mr. Burton L. French, co-author of the bill.

COMMITTEE ON APPROPRIATIONS,  
HOUSE OF REPRESENTATIVES,  
WASHINGTON, D. C.

May 3, 1921.

MR. GEORGE D. BRIGGS,  
25 Madison Ave.,  
New York City, N. Y.

MY DEAR MR. BRIGGS:

I am tremendously near making myself a nuisance by hammering away on the Truth in Fabric measure, trying to force consideration of the same. I have gone over the matter repeatedly with Chairman Winslow and he assured me that it is his very earnest desire that the Committee should take up matters that are of the greatest importance and he feels that exceedingly important legislation is being pressed on the Committee.

I have let him know how important the Truth in Fabric measure is, but he seems not at all convinced. I urged that there was tremendous interest throughout the country as evidenced by letters, editorials, resolutions, communications, etc. He replied that such was not the case when measured by other kinds of correspondence.

We are getting multitudes of letters on proposed changes in taxation, proposed railroad Bureaus, soldier relief legislation, etc., and I am wondering if what impressed Mr. Winslow

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\* *Note.* Mr. Waiker stated later that this letter was signed by Mr. Howard E. Greene and not by Mr. Briggs.

was the relative interest in Truth in Fabric in comparison with the proposed legislation referred to.

He told me that, on the other hand, there was apparently very little interest in Truth in Fabric legislation. He thought that he had received no communications at all on the subject since he has been Chairman. However, he sent for the secretary of the Committee and found that he had received two communications, one a pamphlet and one a protest from a firm of manufacturers. Well, if Mr. Winslow has received only two communications, one a pamphlet opposing the measure and the other a protest from a firm of manufacturers, it seems to me we should do something to let him know there is deep feeling on the subject throughout the country.

In going over the matter also with one of the members of the Steering Committee and the committees in the House and Senate having Truth in Fabric under consideration and I believe it is very important that we impress all of these people with the interest there is in the legislation. A vast amount of correspondence has come to me, so I think we should strive to have letters, petitions, etc., sent to other members of Congress and especially to the Steering Committee and the Committee on Interstate and Foreign Commerce. Our friends over the country have assumed that, when they have once stated their interest in the bill, it should be sufficient. Apparently we will have to do more than this and keep up a constant campaign along the lines I have suggested. Of course, the Committee can take up the consideration of a bill if the majority of members will so vote, overruling the wish of the Chairman. My thought is, though, that it will be much better if we do not need to draw lines now, but that we so impress the whole Committee that, whether they are for the legislation or not, they will feel that it ought at least to be considered.

Yours very truly,  
(Signed) BURTON L. FRENCH.

Covering that letter is one from the National Sheep and Wool Bureau.

NATIONAL SHEEP AND WOOL BUREAU OF AMERICA,  
23 East Jackson Blvd.,  
CHICAGO, ILL.

May 18, 1921.

DEAR FRIEND,

The wool grower and the people cannot be freed from the grievous wrong perpetrated through the use of unidentified shoddy in cloth and clothes, until the French-Capper Truth in Fabric bill is enacted. Great quantities of shoddy are

used in wool apparel and this shoddy counterfeits virgin wool by masquerading under the misunderstood terms, "all wool" and "pure wool." The shoddy interests and their adherents, although small in number, are tremendously powerful in influence. These interests must be expected to put forth their utmost efforts to smother the French-Capper Truth in Fabric bill in committee, just as all previous measures of the sort have been smothered. Yet, its inherent justice and the tremendous need for it would undoubtedly insure its speedy enactment, if it once reached the floor of Congress.

This can be accomplished only by flooding with letters, demanding the bill's immediate passage, the Steering Committee and the Interstate and Foreign Commerce Committee of the House and the Interstate Commerce Committee of the Senate. The same letter should also be sent to your two Senators and your Congressman. It is very important that you send Congressman B. L. French and Senator Capper copies of the letter which you write and a list of the recipients.

You are asked to read carefully the enclosed copy of a letter which Congressman French wrote on May 3 to George D. Briggs, chairman of this Bureau's Legislative Committee. Congressman French is fighting your battle. He is fighting the battle of every wool grower of the United States. He is endeavoring to protect the rights and the interests of every cloth-buying American by freeing him from the unidentified shoddy evil. The very least that you and I and others can do to support him is to write at once all of those suggested above, demanding the immediate enactment of the Truth in Fabric bill. You have already received a list of the committeemen. Bear in mind when writing that this bill is known in the House as H. R. 64, and in the Senate as S. 799.

Remember that hearings on the French-Capper Truth in Fabric bill will be held before the Senate Interstate Commerce Committee at 10.30 A. M., June 1, in Room 410, Senate Office Building, Washington, D. C. It is of great importance that you should go to Washington and testify for the bill. We wrote you on May 7, enclosing a form which we requested you to fill out, giving definite information necessary to enable us to organize properly the case of Truth in Fabric. (The shoddy interests and their adherents are thoroughly organized and acting as a unit—it is absolutely necessary that those in favor of the French-Capper measure should be equally well organized.) If you have not filled out the form as requested, please do so at once, and send it to us by return mail.

Very truly yours,

(Signed) NATIONAL SHEEP AND WOOL  
BUREAU OF AMERICA.

Mr. Wood might have called attention to the large number of "boiler plate" matters, including news items, editorials for reproduction, and incorporation in other editorials, and controversial articles which were sent out by the Wool Bureau to trade and daily papers in the hope of stirring up interest in the movement. Mr. Wood might also have mentioned the many pamphlets which were circulated widely among members of women's clubs for the purpose of "lining them up" in favor of the bill. Among these pamphlets may be mentioned Truth in Fabric, Sacrificing the Kernel for the Husk, A Statement on Truth in Fabric, The Call for Truth in Fabric, Objections to the French-Capper Truth in Fabric Bill Answered, and Editorial Light on Truth in Fabric. Oh, no, the resolutions were "not the result of propaganda in any way, shape or manner."

Mr. Wood might also have read into the record a circular letter distributed in June by the National Sheep and Wool Bureau of America, which was as follows:

JUNE, 1921.

NATIONAL SHEEP AND WOOL BUREAU OF AMERICA.  
23 East Jackson Blvd., Chicago.

DEAR FRIEND:

If Congress is to be spurred on to pass the French-Capper Truth in Fabric bill at an early date, every man and woman of the nation who favors this measure must register his or her emphatic demand for its passage by letter or telegraph, *now*. Enclosed are the Senate and House Committees which have most to do with the consideration of this bill. Write every member of them and your own Senators and Congressman, as well. Remember when writing that the new designations of this bill are: in the Senate, S. 799, and, in the House of Representatives, H. R. 64.

To aid this Bureau in carrying on the Truth in Fabric campaign, wool growers who are not in a position to contribute money may contribute wool instead. Friends of the movement are prepared to take over all contributions of wool at the best market price. Contributors will be credited with the amounts their gifts bring on the books of this Bureau. The Truth in Fabric bill, which is designed to compel textile manufacturers to label their cloth with its content of virgin wool and shoddy, offers the only means which can enlighten



consumers as to what they get in the name of "all wool." Consumers want virgin wool cloth when they ask for "all wool" cloth and only labels guaranteed by law will enable them to get what they want. The use of virgin wool in cloths that are supposed to be made of virgin wool will oust the rag-picker from the wool grower's legitimate market and introduce a new element of honesty into the nation's business proceedings.

(Signed) NATIONAL SHEEP AND WOOL  
BUREAU OF AMERICA.

Mr. Wood might have inserted in the record a letter signed by Howard E. Greene, Secretary of the National Sheep and Wool Bureau, which was sent out in May or June. Mr. Greene resigned that position recently, and in a letter seeking a new job, he asked:

"HAVE YOU AN OPENING FOR ME?"

My Qualifications:—

College and Law School education.

For 15 years, reporter, rewrite man, copy reader, department head and editor on New York City newspapers.

For 6 years, practiced law in connection with newspaper work.

Throughout 15 years, carried on publicity work and conducted political campaigns.

Served as a writer and copy reader in publicity department of New York Liberty Loan Committee.

Acted as office manager, circular writer, market letter writer, advertising man and general publicity director in Wall Street broker's office.

For a year, was a field publicity manager of "movie" concern, writing advertisements and general publicity.

*For more than a year, engaged in nation-wide campaign in behalf of Truth in Fabric as the secretary of the National Sheep and Wool Bureau of America, preparing news items and special articles for 3,300 newspapers and periodicals constantly circularizing thousands of men and women organization leaders in every walk of life, making speeches, etc. Where a year ago only 40 organizations had endorsed the movement, today it has the endorsement of more*



than 300 organizations of every sort, from labor unions to state legislatures and many national in scope, with memberships aggregating millions.

Respectfully submitted,

(Signed) HOWARD E. GREENE,  
4643 Greenwood Ave., Chicago, Ill.

(The italics are ours.)

We submit the above letter from Representative Burton L. French to Mr. George D. Briggs, the two letters signed by the National Sheep and Wool Bureau of America and widely distributed in last May and June, and the circular letter sent out by Howard E. Greene, after he had resigned as secretary of the Sheep and Wool Bureau, and ask unbiased readers whether or not the unqualified reply made to Senator Watson's question by Mr. Walker is not proven false by the record made by his own friends, and the former employe of the organization of which he has been the president and chief sponsor. Mr. Walker told Senator Watson that such widespread action in all sections of the Union simultaneously "was not the result of propaganda *in any way, shape or manner.*" It seems to us that this statement was false, and that Mr. Walker when he made it either knew it was not true or was wholly ignorant of what was being done by the man he employed as the chief propagandist, according to Greene's own admission, of the "nation-wide campaign in behalf of Truth in Fabric." Which horn of the dilemma will you take, Mr. Walker?

By referring to the editorial in this issue showing the dominating influence Strong, Hewat & Co., of which Mr. Alexander Walker is vice-president, has in the Sheep and Wool Bureau, the reader may partially understand the desire of Mr. Walker to deny the propaganda which has been carried on for the progeny of his brain, and the capital made out of it by his company.

## CAN COST BE STANDARDIZED IN THE WOOL MANUFACTURE?

By EUGENE SZEPESI.

THERE are in the United States approximately one thousand mills engaged in manufacturing woolens and worsteds, with a capital investment of about \$500,000,000. Each one of them has complicated production and cost problems and has adopted by force of necessity some means of control. It is doubtful whether among the thousand plants there are two which follow the same method of cost determination unless they are under the same management. This means that there are hardly two management organizations whose cost estimates are obtained in the same manner although practically all sell their products on the same market, in sharp competition with each other, and each one expects a fair return on its product.

### THE WOOL MANUFACTURE IS COMPLEX AND DIFFICULT.

Wool manufacturing is a very complex problem. The nature of the raw material with its variable shrinkages, the various blends necessary, variations of operations and differing reclaim value of wastes, make it a difficult business. In selling it must trade in an unstable market which is usually very early affected by economic depressions.

Various remedies for the stabilization of the market have been suggested by the leaders of the industry. Among them is the adoption of a uniform method of cost control because it has been realized that so long as every manufacturer has his own cost determination no useful comparisons of manufacturing costs can be made. The very fact that one organization is capable of producing an article at a profit does not necessarily mean that every organization can produce the same article at the same price. If the facts of costs, obtained by a uniform method, were known to every manufacturer many attractive looking prospects would be abandoned, and his activity would be directed into more lucrative fields. Because of this unstandardized and primitive condition of the cost

control of the industry manufacturers often voluntarily reduce the market value of an article, believing that their manufacturing facilities enable them to manufacture the product at a lower price. Consequently they are willing to cut the selling price to get the business which they believe will leave them a fair profit.

#### MANY ITEMS ENTER INTO MANUFACTURING COSTS.

Manufacturing costs are made up of thousands of items and unless the assignment of these cost factors to the unit product follows the same procedure in all mills every manufacturer will have a different cost figure, even if the costs of manufacturing are identical. This makes the cost factor a big problem at any time, and its regulation or standardization would be a great benefit to the industry. Failure of past attempts to remedy this situation and develop a uniform method of cost control was not because manufacturers did not realize the importance of this problem but because the solutions offered put greater stress upon the academic procedure of cost control than the development of simple standards by which production and cost may be measured and compared without the necessity of elaborate records and excessive clerical labor.

For a considerable time the writer has made exhaustive studies of the possibility of developing simple and accurate measures of costs and production that will enable a manufacturer, no matter how large or small his plant, to determine weekly his accurate cost without the necessity of excessive clerical labor and at the same time quickly and safely to estimate the manufacturing cost of any article. This procedure is based upon the development of definite standards or measures to which the actual production is compared.

In modern life everything is measured by, or referred to, standards. Our currency is a standard measure of gold. Coal is measured by its standard, known as a ton. Wool is measured by a standard, known as a pound. Time is measured by its standards, known as years, months, weeks, days, hours, and minutes. There is no reason why production, which is nothing else but the combination of currency, weight,

and time, cannot be measured by standards, if such standards are developed. That such standards can be developed is demonstrated by the following illustrations.

Let us take for an example the spinning department of a woolen or worsted mill manufacturing both warp and filling yarns, ranging from one to six runs. Excluding material, the cost of manufacturing in this department will be:

Productive Labor (wages of the spinners);

Non-Productive Labor (wages of every other employe such as overseers, fixers, bobbin carriers, helpers, etc. connected with this department);

Burden Cost (which represents the expense that has to be shared by the department besides the cost of raw material, productive and non-productive labor);  
(The burden cost, therefore, will represent rent, power, depreciation, supplies, heat, light, administrative salaries to be carried by the department, etc.)

A standard measure of cost for the spinning department will be the share each pound of product must carry of the above expenses in proportion to the time required for producing that article. The unit measure, therefore, will be time, and in this case mule hours, which is determined in the following manner:

Let it be presumed that under normal conditions this mill is running forty-eight hours a week and the equipment consists of eight mules. The standard measure for this mill is, therefore, 8 times 48, or 384 mule hours per week.

Let it be further presumed that when the mill is working at full capacity the total cost of non-productive labor which makes up the complement of all the departmental workers, with the exception of the spinners, amounts to \$115.00 per week; also that the burden cost or the share of other expenses amounts to \$95.00 per week.

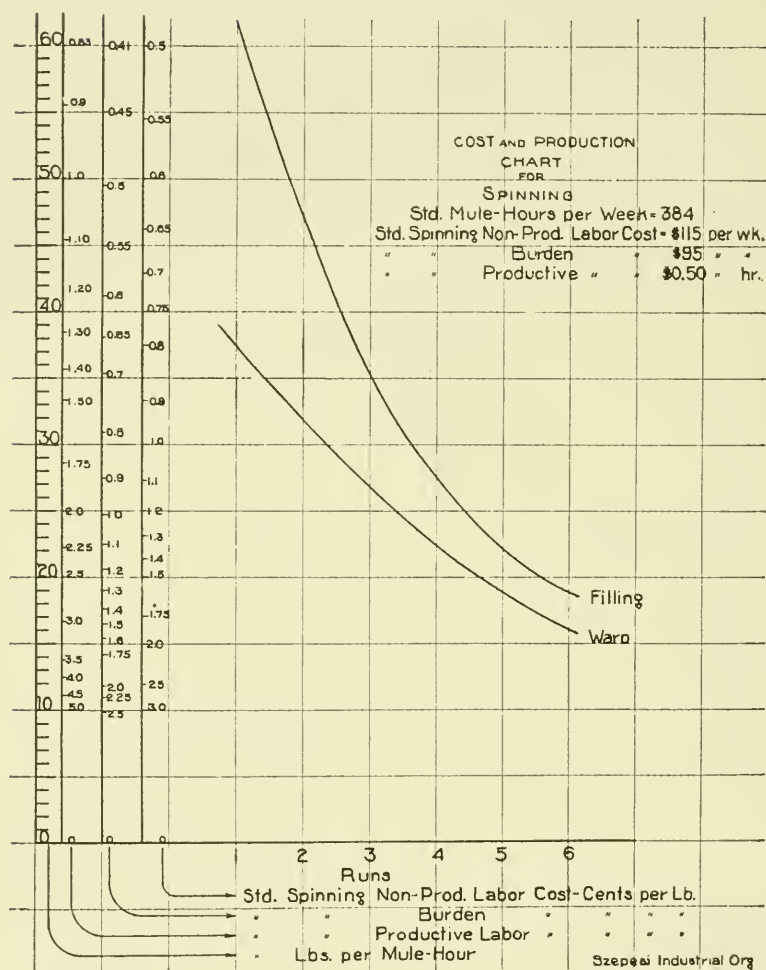
The above facts mean that in this particular mill, with all the equipment running at full capacity of a 48-hour week, every mule hour will cost thirty cents in non-productive labor, because there are eight mules in that mill running forty-eight hours a week, or a total of 384 mule hours per week.

In a similar manner it is determined that the burden or departmental expense, representing power, depreciation, supplies, etc., will cost twenty-five cents for every mule hour, the total weekly standard burden share being \$95.00.

Finally, if the spinners are paid by the hour at a standard rate, say fifty cents, and there is one spinner to every mule the cost per mule hour is equal to fifty cents for productive labor and if the spinners are paid by the pound the standard productive labor cost per pound will be this standard hourly rate divided by the number of pounds that should be produced per hour by a skilled spinner. Presuming that of a certain run of yarn a skilful spinner should produce an average of fifty pounds per hour, this means that the standard piece work rate of the yarn is one cent per pound.

#### SOME STANDARDS CAN BE EASILY MEASURED AND CHARTED.

These are the standards that are capable of simple measurements because they can be charted graphically, which means that the standard cost factor of any article manufactured in the spinning department can be determined without the necessity of further calculations. How such charts may be developed is given in Chart No. 1. In this chart the cost factors, as explained above, form the basis of the standards.



Besides the above standards one more factor must be determined, the production standard. This is the production expected from the individual machines per hour for the various sizes and grades of the product after allowances for doffing, changing rovings, joining broken ends, repairs, etc., have been deducted. This is the standard productive efficiency.

As shown on Chart No. 1, these production standards form the basis of the control, measured in pounds product per mule hour, indicated at the extreme left of the



chart. This method of graphic presentation provides a standard production per mule hour not only for the yarn numbers actually produced but for any run of yarn that may be produced on the machinery of that plant. The standard production per mule hour of any warp or filling yarn within the range of that mill's production is now obtainable from the chart by following the line representing the run number vertically until it is intersected by the curve. The standard production per mule hour is obtained without further calculations from the scale at the extreme left of the chart. For illustration, follow the chart for one run warp yarn. The standard production per mule hour of this is 32 pounds and for filling 47 pounds; of 4.7-run yarn for warp 20 pounds and for filling 23 pounds. In this manner the standard production is obtained for any run of yarn after the proper standards have been established and the chart developed.

The standard cost of productive labor for spinning the yarn is obtained in the same manner. The scale represents the standard cost per mule per hour, which in this mill was determined at fifty cents per hour, divided by the standard pounds. According to Chart No. 1, the standard spinning labor for a two-run warp yarn is \$1.61 per one hundred pounds, while for the filling yarn it is \$1.06 per hundred pounds. For a 4.7-run yarn the standard spinning labor for warp yarn is \$2.50 per hundred pounds and for the filling yarn \$2.12.

The standard departmental expense of burden is determined in the same manner which, according to the illustration, in this instance for a two-run warp yarn was 76 cents per hundred pounds and for a two-run filling yarn 52½ cents per hundred pounds.

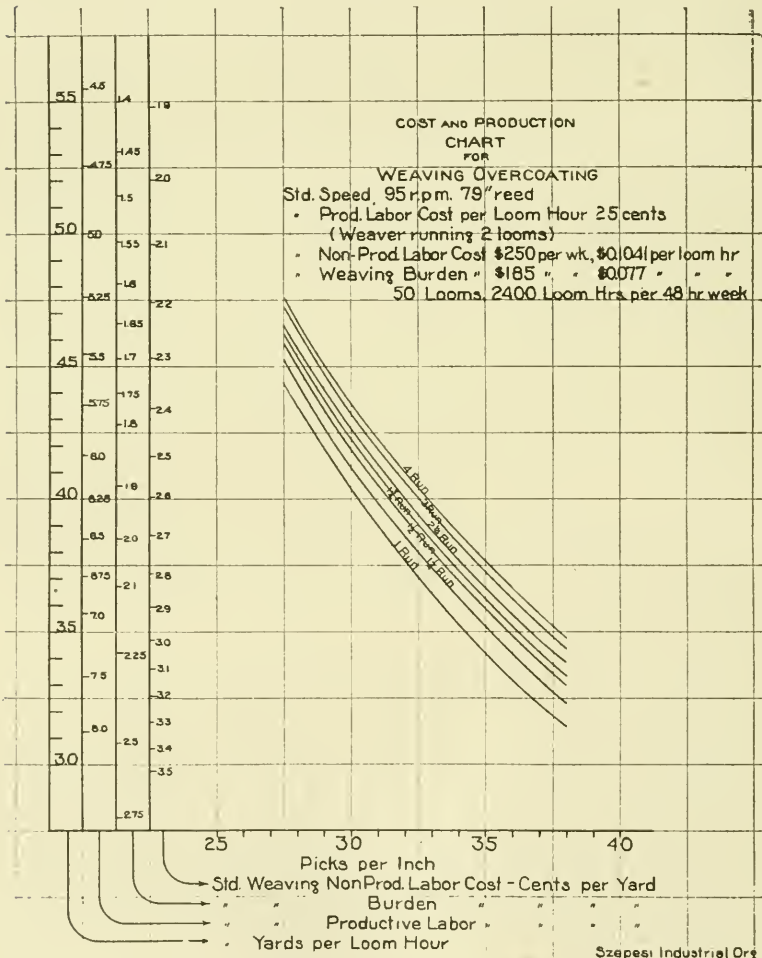
The standard share of non-productive labor for the cost of yarn is determined in the same manner and can be read off directly without any further calculation just as the previous items of cost which for the case illustrated for a 4.7-run warp yarn is \$1.50 and for 4.7-run filling yarn is \$1.26 per hundred pounds.

If such standards are properly established and a correct graphic chart developed the standard spinning production for any grade of stock, together with its standard cost factors,

can be determined in a fraction of the time with sufficient accuracy and without the maintenance of elaborate records otherwise essential.

This method of standardized cost control gives even more than a check upon production cost. It enables a manufacturer to estimate with security the cost of manufacturing on articles not produced before.

That this standardized graphic cost control method is practical for any production problem is illustrated in Chart No. 2, developed for the weaving operation of a wool mill.



The procedure for determining the cost factors is the same as in the previous illustration. The basis for the measurement of the standard production cost is, however, in this case the number of picks per inch. With the assistance of such a chart the standard yards produced per loom hour, the cost of productive labor per yard, the departmental expense of burden share per yard, and the non-productive labor cost per yard are determined for any range of fabric. As can be seen in this illustration, the above cost factors may be obtained from one to four runs. Between the two ranges any run can be calculated without difficulty. For illustration, let it be presumed that the weaving cost standards are needed for an overcoating of thirty picks per inch with one-run filling. On the chart the cost factors can be read off directly as follows:

Standard Production per Loom Hour.....	4.03 yards
Standard Weaving Cost .....	6.2c. per yard
Standard Burden .....	1.91c. per yard
Standard Non-Productive Labor .....	2.59c. per yard

Let it also be presumed that the mill has an opportunity to sell an overcoating of lighter construction for which  $1\frac{1}{2}$ -run filling is used with  $32\frac{1}{2}$  picks per inch. The standard cost factors of weaving will be:

Standard Production per Loom Hour.....	3.88 yards
Standard Weaving Cost .....	6.45c. per yard
Standard Burden .....	2c. per yard
Standard Non-Productive Labor .....	2.7c. per yard

It is evident that such production standards will provide a dependable guide for cost estimates and cost comparisons.

#### COMPARING ACTUAL PRODUCTIONS WITH THE ABOVE STANDARDS.

It is only in rare instances that the actual production cost is the same as the standard. The standard provides the measure to which the actual performance should be compared to show how much above or below standard the actual performance is. This is the most important information a manufacturer needs today. It can be expressed in its percentage

relation to the standard and it can be obtained without the necessity of elaborate clerical computations. If a manufacturer can obtain the information at the end of a week or month that the cost of production in his carding department is twenty-five per cent above standard; in his spinning department fifteen per cent above standard, and in his weaving department twelve per cent above standard, he will gain more dependable information by this simple procedure than all the detailed analyses of control accounts would yield.

Let it be presumed that the accepted conditions of the mill are such that the cost of manufacturing is figured at five per cent above the standard basis. Now if such a comparison shows that the cost of production is twelve per cent above the standard, the mill management knowing that the difference of seven per cent must come out of the profits, it will either eliminate the causes of such increase; or if the increased cost is due to conditions that cannot be remedied, increase the selling price accordingly or look for more lucrative lines.

#### WHAT FACTORS INCREASE OR DECREASE MANUFACTURING COSTS?

The cost factors which increase or decrease manufacturing costs are not alone increased wages, increased cost of supplies and other manufacturing expenses, but also a decrease of productive machine hours caused either by lack of orders, production disturbances, or scarcity of employes. To what extent any cost factor may be affected by the above causes is illustrated herewith.

Since standard cost is based upon standard conditions, which means that all machinery is operating at full time, it is only natural that if some of the equipment is idle the cost of manufacturing will increase because each machine must carry its own charges and if some machines fail in such performance the active machines must take over this burden.

To enable the quick determination of such factors, Correction Tables are developed for each operation and for each cost factor, as shown in Tables No. 1, 2, and 3.

Let it be presumed that the mill having fifty looms, representing 2400 loom hours per week, was compelled, through managerial inefficiency, to shut down some of its looms for

a time, waiting for warp or filling. At the end of the week the weaving department reported that only two thousand loom hours were actually operated while 400 loom hours were lost. According to the table, (Table No. 1), the loss of

TABLE No. 1.  
COST CORRECTION TABLE.  
*Weaving Department Loom Hours Operated.*

Loom Hours Difference.	Per Cent.	Loom Hours Difference.	Per Cent.
400	20.0	540	29.0
410	20.5	550	29.6
420	21.1	560	30.4
430	21.8	570	31.1
440	22.3	580	31.9
450	23.0	590	32.5
460	23.7	600	33.2
470	24.2	610	34.0
480	25.0	620	34.8
490	25.7	630	35.5
500	26.2	640	36.3
510	26.9	650	37.1
520	27.6	660	37.9
530	28.2	670	38.7

400 loom hours production increased the departmental non-productive labor that week 20 per cent. Let it also be presumed that on account of the stoppages of machinery some of the non-productive workers were on short time and the difference between the standard and the actual payroll amounted to \$20.50. By looking up the table, (Table No. 2),

TABLE No. 2.  
COST CORRECTION TABLE.  
*Weaving Department Non-productive Wages.*

Difference in Payroll.	+ or - %	Difference in Payroll.	+ or - %
20.	8.6	27.	12.1
20.50	8.9	27.50	12.3
21.	9.1	28.	12.6
21.50	9.4	28.50	12.9
22.	9.6	29.	13.1
22.50	9.9	29.50	13.3
23.	10.1	30.	13.6
23.50	10.3	30.50	13.9
24.	10.6	31.	14.1
24.50	10.9	31.50	14.3
25.	11.1	32.	14.6
25.50	11.3	32.50	14.9
26.	11.6	33.	15.1
26.50	11.9	33.50	15.3

it is obtained without further calculations that this decreased the cost 8.9 per cent. By deducting the 8.9 per cent from the increase of cost through losses of loom productive hours, the actual increased cost of non-productive labor above the standard is obtained and this was 11.1 per cent for the week. That with the assistance of such Correction Tables any factor of cost may be determined in a simple manner is demonstrated by the following illustration.

Let it be presumed that a mill could obtain sufficient orders to operate on overtime, or 54 hours, instead of the standard 48-hour week. Whether this step will be profitable will not depend upon arguments or opinions after such standardized control is introduced, because it can be determined with absolute certainty. Suppose the mill ran on overtime, or 54 hours, for one week, representing 2700 loom hours, and at the end of the week according to the report received from the department the actual loom hours in operation amounted to 2550 which, according to the table, (Table 3,) is equal to 51

TABLE No. 3.  
COST CORRECTION TABLE.  
*Weaving Department Week Hours Operated.*

Hours Worked During Week.	Corresponding Loom Hours.	Corrections in Per Cents.
56	2800	—8
55	2750	—7
54	2700	—6
53	2650	—5
52	2600	—4
51	2550	—3
50	2500	—2
49	2450	—1
48	2400	0
47	2350	1.4
46	2300	3.
45	2250	4.7
44	2200	6.3
43	2150	8.1
42	2100	10.
41	2050	11.9
40	2000	14.
39	1950	16.1
38	1900	18.4
37	1850	20.8
36	1800	23.3
35	1750	26.
34	1700	28.6
33	1650	31.6
32	1600	35.
31	1550	38.4
30	1500	42.



weekly hours. This table shows that the overtime has decreased the standard cost of non-productive labor three per cent. Let it be presumed the payroll for the same week indicates that on account of the overtime work the non-productive labor was \$30.50 above the standard which, according to Table No. 2, increased the cost 13.9 per cent. By deducting the gain of three per cent from the above 13.9 per cent it is clearly shown that by running overtime the cost of non-productive labor in the weaving department will increase 10.9 per cent, or approximately eleven per cent. The management can therefore decide intelligently whether or not the additional profits obtained from the goods produced during this period will offset the increased cost.

Any of the cost factors for departmental burden, general burden, and non-productive labor can be determined in the same simple manner as described above, whether the mill runs full time, overtime, or short time. This gives the management a definite measure week by week and shows whether manufacturing costs are above or below these standards. Of such costs, summaries can be prepared as shown in Table No. 4 for each cost factor indicating how much the increase or

TABLE No. 4.

## WEEKLY COST SUMMARY.

*Non-productive Labor.*

Week ending\_\_\_\_\_

Department.	Dept. Standard.	Dept. Cost for Week.	Diff. from Std.	% Diff. from Std.
Winding .....				
Knitting.....	90.50	98.40	+7.90	+8.73
Washing, etc.....				
Cutting-up .....	90.75	92.14	+1.39	+1.53
Sewing Room .....	171.50	173.41	+1.91	+1.11
Finishing.....				
Totals.....	352.75	363.95	+11.20	+3.17

decrease amounted to for each department and how much the total increase or decrease for all departments was during the week.

This is a very brief outline of the possibilities of standardized cost control which would enable manufacturers to measure their costs directly and accurately. It is also an important fact that this method of cost control will not interfere in any way with the general accounting system. On the contrary, it serves as a check upon it.

My personal suggestion to this Association is that it develop definite production and cost standards for each branch of the industry so that each member of the Association can be provided with a uniform or standard measure of cost and production, a uniform method of the distribution of the cost factors and the standardized correlation of the burden items. By that step the industry would gain materially because each member of the Association would measure his cost by the same standard unit. The development of the charts and Correction Tables for each individual member would be but a technical detail for which each could receive assistance from the Association.

If the wool manufacturers were provided with such protective measures there is no question in the writer's mind that unfair competition through lack of knowledge of manufacturing cost, a great deal of the instability of the market, and corresponding losses would be eliminated. Competition would be based upon skill and ability to produce, and not on often deceptive presumptions.

## THE EMERGENCY TARIFF LAW.

THE Emergency tariff bill was passed by the House of Representatives on April 15, 1921, and was passed with an amendment by the Senate on May 11 by a vote of 63 to 28. Seven Democrats—Broussard and Ransdell, Louisiana; Jones, New Mexico; Kendrick, Wyoming; Myers, Montana; Pittman, Nevada; and Sheppard, Texas, voted for the bill, while one Republican—Moses, New Hampshire, voted against it. The conference report was adopted by both the House and the Senate, was signed by the President, May 27, 1921, and is now the law.

## HISTORY OF THE BILL.

As reintroduced in the House this session the bill was different from the one which President Wilson vetoed. The dutiable list remained unchanged, but the House included a provision that in the collection of duties no country's currency should be estimated to have decreased more than 66⅔ per cent. The Senate cut this out and inserted a provision that the assessment of ad valorem duties shall be upon the basis of the foreign home market or the export value whichever is the higher.

The House bill imposed a dumping duty on all imported merchandise sold at a price less than the foreign home value, or in the absence of such value, at less than the value to countries other than the United States or in the absence of both such values at less than the cost of production.

The Senate amendment provided that the anti-dumping title shall apply after an investigation by the Secretary of the Treasury and he has made public his finding that an industry in the United States is being or is likely to be injured or is prevented from being established by reason of the importations of merchandise into the United States at less than its fair value.

The Senate also added the amendment giving protection to

the dyestuffs industry pending the enactment of a permanent tariff bill.

The life of the bill is limited to six months from its approval.

The full text of the bill, as agreed to, and with the changes made in conference enclosed in brackets reads as follows:

AN ACT imposing temporary duties upon certain agricultural products to meet present emergencies, and to provide revenue; to regulate commerce with foreign countries; to prevent dumping of foreign merchandise on the markets of the United States; to regulate the value of foreign money; and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

## TITLE I.

### EMERGENCY TARIFF.

That on and after the day following the passage of this Act, for the period of six months, there shall be levied, collected, and paid upon the following articles, when imported from any foreign country into the United States or into any of its possessions (except the Philippine Islands, the Virgin Islands, and the islands of Guam and Tutuila), the rates of duty which are prescribed by this section, namely:

1. Wheat, 35 cents per bushel.
2. Wheat flour and semolina, 20 per centum ad valorem.
3. Flaxseed, 30 cents per bushel of fifty-six pounds.
4. Corn or maize, 15 cents per bushel of fifty-six pounds.
5. Beans, provided for in paragraph 197 of the Act entitled "An Act to reduce tariff duties and to provide revenue for the Government, and for other purposes," approved October 3, 1913, 2 cents per pound.
6. Peanuts or ground beans, 3 cents per pound.
7. Potatoes, 25 cents per bushel of sixty pounds.
8. Onions, 40 cents per bushel of fifty-seven pounds.
9. Rice, cleaned, 2 cents per pound, except rice cleaned for use in the manufacture of canned foods, on which the rate of duty shall be 1 cent per pound; uncleaned rice, or rice free of the outer hull and still having the inner cuticle on,  $1\frac{3}{4}$  cents per pound, rice flour, and rice meal, and rice broken which will pass through a number twelve wire sieve of a kind prescribed by the Secretary of the Treasury, one-fourth of 1 cent

per pound; paddy, or rice having the outer hull on, three-fourths of 1 cent per pound.

10. Lemons, 2 cents per pound.

11. Oils: Peanut, 26 cents per gallon; cottonseed, coconut, and soya bean, 20 cents per gallon; olive, 40 cents per gallon in bulk, 50 cents per gallon in containers of less than five gallons.

12. Cattle, 30 per centum ad valorem.

13. Sheep: One year old or over, \$2 per head; less than one year old, \$1 per head.

14. Fresh or frozen beef, veal, mutton, lamb, and pork, 2 cents per pound. Meats of all kinds, prepared or preserved, not specially provided for herein, 25 per centum ad valorem.

15. Cattle and sheep and other stock imported for breeding purposes shall be admitted free of duty.

16. Cotton having a staple of one and three-eighths inches or more in length, 7 cents per pound.

17. Manufactures of which cotton of the kind provided for in paragraph 16 is the component material of chief value, 7 cents per pound, in addition to the rates of duty imposed thereon by existing law.

18. Wool, commonly known as clothing wool, including hair of the camel, angora goat, and alpaca, but not such wools as are commonly known as carpet wools: Unwashed, 15 cents per pound; washed, 30 cents per pound; scoured, 45 cents per pound. Unwashed wools shall be considered such as shall have been shorn from the animal without any cleaning; washed wools shall be considered such as have been washed with water only on the animal's back or on the skin; wools washed in any other manner than on the animal's back or on the skin shall be considered as scoured wool. On wool and hair provided for in this paragraph, which is sorted or increased in value by the rejection of any part of the original fleece, the duty shall be twice the duty to which it would otherwise be subject, but not more than 45 cents per pound.

19. Wool and hair of the kind provided for in paragraph 18, when advanced in any manner or by any process of manufacture beyond the washed or scoured condition, and manufactures of which wool or hair of the kind provided for in paragraph 18 is the component material of chief value, 45 cents per pound, in addition to the rates of duty imposed thereon by existing law.

20. Sugars, tank bottoms, sirups of cane juice, melada, concentrated melada, concrete and concentrated molasses, testing by the polariscope not above seventy-five degrees, one and sixteen one-hundredths of 1 cent per pound, and for every additional degree shown by the polariscopic test, four one-

hundredths of 1 cent per pound additional, and fractions of a degree in proportion; molasses testing not above forty degrees, 24 per centum ad valorem; testing above forty degrees and not above fifty-six degrees,  $3\frac{1}{2}$  cents per gallon; testing above fifty-six degrees, 7 cents per gallon; sugar drainings and sugar sweepings shall be subject to duty as molasses or sugar, as the case may be, according to polariscopic test.

21. Butter, and substitutes therefor, 6 cents per pound.

22. Cheese, and substitutes therefor, 23 per centum ad valorem.

23. Milk, fresh, 2 cents per gallon; cream, 5 cents per gallon.

24. Milk, preserved or condensed, or sterilized by heating or other processes, including weight of immediate coverings, 2 cents per pound; sugar of milk, 5 cents per pound.

25. Wrapper tobacco and filler tobacco when mixed or packed with more than 15 per centum of wrapper tobacco, and all leaf tobacco the product of two or more countries or dependencies when mixed or packed together, if unstemmed, \$2.35 per pound; if stemmed, \$3 per pound; filler tobacco not specially provided for in this section, if unstemmed, 35 cents per pound; if stemmed, 50 cents per pound.

The term "wrapper tobacco" as used in this section means that quality of leaf tobacco which has the requisite color, texture, and burn, and is of sufficient size for cigar wrappers, and the term "filler tobacco" means all other leaf tobacco.

26. Apples, 30 cents per bushel.

27. Cherries in a raw state, preserved in brine or otherwise, 3 cents per pound.

28. Olives, in solutions, 25 cents per gallon; olives, not in solutions, 3 cents per pound.

Sec. 2. The rates of duty imposed by section 1 (except under paragraphs 17 and 19) in the case of articles on which a rate of duty is imposed by existing law, shall be in lieu of such rate of duty during the six months' period referred to in section 1.

Sec. 3. After the expiration of the six months' period referred to in section 1, the rates of duty upon the articles therein enumerated shall be those, if any, imposed thereon by existing law.

Sec. 4. The duties imposed by this title shall be levied, collected, and paid on the same basis, in the same manner, and subject to the same provisions of law, including penalties, as the duties imposed by such Act of 1913.

Sec. 5. That this title shall be cited as the "Emergency Tariff Act."



## TITLE II.—ANTI-DUMPING.

## DUMPING INVESTIGATION.

Sec. 201. (a) That whenever the Secretary of the Treasury (hereinafter in this Act called the "Secretary"), after such investigation as he deems necessary, finds that an industry in the United States is being or is likely to be injured, or is prevented from being established, by reason of the importation into the United States of a class or kind of foreign merchandise, and that merchandise of such class or kind is being sold or is likely to be sold in the United States or elsewhere at less than its fair value, then he shall make such finding public to the extent he deems necessary, together with a description of the class or kind of merchandise to which it applies in such detail as may be necessary for the guidance of the appraising officers.

(b) Whenever in the case of any imported merchandise of a class or kind as to which the Secretary has not so made public a finding the appraiser or person acting as appraiser has reason to believe or suspect, from the invoice or other papers or from information presented to him, that the purchase price is less, or that the exporter's sales price is less or likely to be less, than the foreign market value (or, in the absence of such value, than the cost of production) he shall forthwith, under regulations prescribed by the Secretary, notify the Secretary of such fact and withhold his appraisal report to the collector as to such merchandise until the further order of the Secretary, or until the Secretary has made public a finding as provided in subdivision (a) in regard to such merchandise.

## SPECIAL DUMPING DUTY.

Sec. 202. (a) That in the case of all imported merchandise, whether dutiable or free of duty, of a class or kind as to which the Secretary has made public a finding as provided in section 201, and as to which the appraiser or person acting as appraiser has made no report to the collector before such finding has been so made public, if the purchase price or the exporter's sales price is less than the foreign market value (or, in the absence of such value than the cost of production) there shall be levied, collected, and paid, in addition to the duties imposed thereon by law, a special dumping duty in an amount equal to such difference.

(b) If it is established to the satisfaction of the appraising officers, under regulations prescribed by the Secretary, that the amount of such difference between the purchase price and

the foreign market value is wholly or partly due to the fact that the wholesale quantities, in which such or similar merchandise is sold or freely offered for sale to all purchasers for exportation to the United States in the ordinary course of trade, are greater than the wholesale quantities in which such or similar merchandise is sold or freely offered for sale to all purchasers in the principal markets of the country of exportation in the ordinary course of trade for home consumption (or, if not so sold or offered for sale for home consumption, then for exportation to countries other than the United States), then due allowance shall be made therefor in determining the foreign market value for the purposes of this section.

(c) If it is established to the satisfaction of the appraising officers, under regulations prescribed by the Secretary, that the amount of such difference between the exporter's sales price and the foreign market value is wholly or partly due to the fact that the wholesale quantities, in which such or similar merchandise is sold or freely offered for sale to all purchasers in the principal markets of the United States in the ordinary course of trade, are greater than the wholesale quantities in which such or similar merchandise is sold or freely offered for sale to all purchasers in the principal markets of the country of exportation in the ordinary course of trade for home consumption (or, if not so sold or offered for sale for home consumption, then for exportation to countries other than the United States), then due allowance shall be made therefor in determining the foreign market value for the purpose of this section.

#### PURCHASE PRICE.

Sec. 203. That for the purposes of this title, the purchase price of imported merchandise shall be the price at which such merchandise has been purchased or agreed to be purchased, prior to the time of exportation, by the person by whom or for whose account the merchandise is imported, including the cost of all containers and coverings and all other costs, charges, and expenses incident to placing the merchandise in condition, packed ready for shipment to the United States, less the amount, if any, included in such price, attributable to any costs, charges, United States import duties, and expenses, incident to bringing the merchandise from the place of shipment in the country of exportation to the place of delivery in the United States; and plus the amount, if not included in such price, of any export tax imposed by the country of exportation on the exportation of the merchandise to the United States; and plus the amount of any import

duties imposed by the country of exportation which have been rebated, or which have not been collected, by reason of the exportation of the merchandise to the United States; and plus the amount of any taxes imposed in the country of exportation upon the manufacturer, producer, or seller, in respect to the manufacture, production or sale of the merchandise, which have been rebated, or which have not been collected, by reason of the exportation of the merchandise to the United States.

#### EXPORTER'S SALES PRICE.

Sec. 204. That for the purpose of this title the exporter's sales price of imported merchandise shall be the price at which such merchandise is sold or agreed to be sold in the United States, before or after the time of importation, by or for the account of the exporter, including the cost of all containers and coverings and all other costs, charges, and expenses incident to placing the merchandise in condition, packed ready for shipment to the United States, less (1) the amount, if any, included in such price, attributable to any costs, charges, United States import duties, and expenses, incident to bringing the merchandise from the place of shipment in the country of exportation to the place of delivery in the United States, (2) the amount of the commissions, if any, for selling in the United States the particular merchandise under consideration, (3) an amount equal to the expenses, if any, generally incurred by or for the account of the exporter in the United States in selling identical or substantially identical merchandise, and (4) the amount of any export tax imposed by the country of exportation on the exportation of the merchandise to the United States; and plus the amount of any import duties imposed by the country of exportation which have been rebated, or which have not been collected, by reason of the exportation of the merchandise to the United States; and plus the amount of any taxes imposed in the country of exportation upon the manufacturer, producer, or seller in respect to the manufacture, production, or sale of the merchandise, which have been rebated, or which have not been collected, by reason of the exportation of the merchandise to the United States.

#### FOREIGN MARKET VALUE.

Sec. 205. That for the purposes of this title the foreign market value of imported merchandise shall be the price, at the time of exportation of such merchandise to the United States, at which such or similar merchandise is sold or freely

offered for sale to all purchasers in the principal markets of the country from which exported, in the usual wholesale quantities and in the ordinary course of trade for home consumption (or, if not so sold or offered for sale for home consumption, then for exportation to countries other than the United States), plus, when not included in such price, the cost of all containers and coverings and all other costs, charges, and expenses incident to placing the merchandise in condition packed ready for shipment to the United States except that in the case of merchandise purchased or agreed to be purchased by the person by whom or for whose account the merchandise is imported, prior to the time of exportation, the foreign market value shall be ascertained as of the date of such purchase or agreement to purchase. In the ascertainment of foreign market value for the purpose of this title, no pretended sale or offer for sale, and no sale or offer for sale intended to establish a fictitious market shall be taken into account.

#### COST OF PRODUCTION.

Sec. 206. That for the purposes of this title the cost of production of imported merchandise shall be the sum of—

(1) The cost of materials of, and of fabrication, manipulation, or other process employed in manufacturing or producing, identical or substantially identical merchandise, at a time preceding the date of shipment of the particular merchandise under consideration which would ordinarily permit the manufacture or production of the particular merchandise under consideration in the usual course of business.

(2) The usual general expenses (not less than 10 per centum of such cost) in the case of identical or substantially identical merchandise;

(3) The cost of all containers and coverings, and all other costs, charges, and expenses incident to placing the particular merchandise under consideration in condition packed ready for shipment to the United States; and

(4) An addition for profit (not less than 8 per centum of the sum of the amounts found under paragraphs (1) and (2) equal to the profit which is ordinarily added), in the case of merchandise of the same general character as the particular merchandise under consideration, by manufacturers or producers in the country of manufacture or production who are engaged in the same general trade as the manufacturer or producer of the particular merchandise under consideration.

## EXPORTER.

Sec. 207. That for the purposes of this title the exporter of imported merchandise shall be the person by whom or for whose account the merchandise is imported into the United States:

(1) If such person is the agent or principal of the exporter, manufacturer, or producer; or

(2) If such person owns or controls, directly or indirectly, through stock ownership or control or otherwise, any interest in the business of the exporter, manufacturer, or producer; or

(3) If the exporter, manufacturer, or producer owns or controls, directly or indirectly, through stock ownership or control or otherwise, any interest in any business conducted by such person; or

(4) If any person or persons, jointly or severally, directly or indirectly, through stock ownership or control or otherwise, own or control in the aggregate 20 per centum or more of the voting power or control in the business carried on by the person by whom or for whose account the merchandise is imported into the United States, and also 20 per centum or more of such power or control in the business of the exporter, manufacturer, or producer.

## OATHS AND BONDS ON ENTRY.

Sec. 208. That in the case of all imported merchandise, whether dutiable or free of duty, of a class or kind as to which the Secretary has made public a finding as provided in section 201, and delivery of which has not been made by the collector before such finding has been so made public, unless the person by whom or for whose account such merchandise is imported makes oath before the collector, under regulations prescribed by the Secretary, that he is not an exporter, or unless such person declares under oath at the time of entry, under regulations prescribed by the Secretary, the exporter's sales price of such merchandise, it shall be unlawful for the collector to deliver the merchandise until such person has made oath before the collector, under regulations prescribed by the Secretary, that the merchandise has not been sold or agreed to be sold by such person, and has given bond to the collector, under regulations prescribed by the Secretary, with sureties approved by the collector, in an amount equal to the estimated value of the merchandise, conditioned: (1) that he will report to the collector the exporter's sales price of the merchandise within 30 days after such mer-



chandise has been sold or agreed to be sold in the United States, (2) that he will pay on demand from the collector the amount of special dumping duty, if any, imposed by this title upon such merchandise, and (3) that he will furnish to the collector such information as may be in his possession and as may be necessary for the ascertainment of such duty, and will keep such records as to the sale of such merchandise as the Secretary may by regulation prescribe.

#### DUTIES OF APPRAISERS.

Sec. 209. That in the case of all imported merchandise, whether dutiable or free of duty, of a class or kind as to which the Secretary has made public a finding as provided in section 201, and as to which the appraiser or person acting as appraiser has made no report to the collector before such finding has been so made public, it shall be the duty of each appraiser or person acting as appraiser, by all reasonable ways and means to ascertain, estimate, and appraise (any invoice or affidavit thereto or statement of cost of production to the contrary notwithstanding) and report to the collector the foreign market value or the cost of production, as the case may be, the purchase price, and the exporter's sales price, and any other facts which the Secretary may deem necessary for the purposes of this title.

#### APPEALS AND PROTESTS.

Sec. 210. That for the purposes of this title the determination of the appraiser or person acting as appraiser as to the foreign market value or the cost of production, as the case may be, the purchase price, and the exporter's sales price, and the action of the collector in assessing special dumping duty, shall have the same force and effect and be subject to the same right of appeal and protest, under the same conditions and subject to the same limitations; and the general appraisers, the Board of General Appraisers, and the Court of Customs Appeals shall have the same jurisdiction, powers, and duties in connection with such appeals and protests as in the case of appeals and protests relating to customs duties under existing law.

#### DRAWBACKS.

Sec. 211. That the special dumping duty imposed by this title shall be treated in all respects as regular customs duties within the meaning of all laws relating to the drawback of customs duties.



## SHORT TITLE.

Sec. 212. That this title may be cited as the "Anti-dumping Act, 1921."

## TITLE III.—ASSESSMENT OF AD VALOREM DUTIES.

Sec. 301. That whenever merchandise which is imported into the United States is subject to an ad valorem rate of duty or to a duty based upon or regulated in any manner by the value thereof, duty shall in no case be assessed on a value less than the export value of such merchandise.

## EXPORT VALUE.

Sec. 302. That for the purposes of this title the export value of imported merchandise shall be the price, at the time of exportation of such merchandise to the United States, at which such or similar merchandise is sold or freely offered for sale to all purchasers in the principal markets of the country from which exported, in the usual wholesale quantities and in the ordinary course of trade, for exportation to the United States, including the cost of all containers and coverings and all other costs, charges, and expenses incident to placing the merchandise in condition, packed ready for shipment to the United States, less the amount, if any, included in such price, attributable to any costs, charges, United States import duties, and expenses, incident to bringing the merchandise from the place of shipment in the country of exportation to the place of delivery in the United States, and plus, if not included in such price, the amount of any export tax imposed by the country of exportation on merchandise exported to the United States.

## REFERENCES TO "VALUE" IN EXISTING LAW.

Sec. 303. (a) That wherever in Title I of this Act, or in the Tariff Act of 1913, as amended, or in any law of the United States in existence at the time of the enactment of this Act relative to the appraisement of imported merchandise (except sections 2874, 2976, and 3016 of the Revised Statutes, and section 801 of the Revenue Act of 1916), reference is made to the value of imported merchandise (irrespective of the particular phraseology used and irrespective of whether or not such phraseology is limited or qualified by words referring to country or port of exportation or principal markets) such reference shall, in respect to all merchandise imported on or after the day this Act takes effect, be construed to refer, except as provided in subdivision (b), to

actual market value as defined by the law in existence at the time of the enactment of this Act, or to export value as defined by section 302 of this Act, whichever is higher.

(b) If the rate of duty upon imported merchandise is in any manner dependent upon the value of any component material thereof, such value shall be an amount determined under the provisions of the Tariff Act of 1913, as in force prior to the enactment of this Act.

#### DEFINITIONS.

Sec. 304. That when used in this title the term "Tariff Act of 1913" means the Act entitled "An Act to reduce tariff duties and provide revenue for the Government, and for other purposes," approved October 3, 1913.

### TITLE IV.—GENERAL PROVISIONS.

#### STATEMENTS IN INVOICE.

Sec. 401. That all invoices of imported merchandise, and all statements in the form of an invoice, in addition to the statements required by law in existence at the time of the enactment of this Act, shall contain such other statements as the Secretary may by regulation prescribe, and a statement as to the currency in which made out, specifying whether gold, silver, or paper.

#### STATEMENTS AT TIME OF ENTRY.

Sec. 402. That the owner, importer, consignee, or agent, making entry of imported merchandise, shall set forth upon the invoice, or statement in the form of an invoice, and in the entry, in addition to the statements required by the law in existence at the time of the enactment of this Act, such statements, under oath if required, as the Secretary may by regulation prescribe.

#### CONVERSION OF CURRENCY.

Sec. 403. (a) That section 25 of the Act of August 27, 1894, entitled "An Act to reduce taxation, to provide revenue for the Government, and for other purposes," is amended to read as follows:

Sec. 25. That the value of foreign coin as expressed in the money of account of the United States shall be that of the pure metal of such coin of standard value; and the values of the standard coins in circulation of the various nations of the world shall be estimated quarterly by the Director of the

Mint and be proclaimed by the Secretary of the Treasury quarterly on the first day of January, April, July, and October in each year.

(b) For the purpose of the assessment and collection of duties upon merchandise imported into the United States on or after the day of the enactment of this Act, wherever it is necessary to convert foreign currency into currency of the United States, such conversion, except as provided in subdivision (c) shall be made at the values proclaimed by the Secretary under the provisions of section 25 of such Act of August 27, 1894, for the quarter in which the merchandise was exported.

(c) If no such value has been proclaimed, or if the value so proclaimed varies by 5 per centum or more from a value measured by the buying rate in the New York market at noon on the day of exportation, conversion shall be made at a value measured by such buying rate. For the purposes of this subdivision such buying rate shall be the buying rate for cable transfers payable in the foreign currency so to be converted; and shall be determined by the Federal Reserve Bank of New York and certified daily to the Secretary, who shall make it public at such times and to such extent as he deems necessary. In ascertaining such buying rate such Federal Reserve Bank may in its discretion (1) take into consideration the last ascertainable transactions and quotations, whether direct or through the exchange of other currencies, and (2) if there is no market buying rate for such cable transfers, calculate such rate from actual transactions and quotations in demand or time bills of exchange.

(d) Sections 2903 and 3565 of the Revised Statutes are repealed.

(e) Section 25 of such Act of August 27, 1894, as in force prior to the enactment of this Act, and section 2903 of the Revised Statutes, shall remain in force for the assessment and collection of duties on merchandise imported into the United States prior to the day of the enactment of this Act.

#### INSPECTION OF EXPORTER'S BOOKS.

Sec. 404. That if any person, manufacturing, producing, selling, shipping, or consigning merchandise exported to the United States fails, at the request of the Secretary, or an appraiser, or person acting as appraiser, or a collector, or a general appraiser, or the Board of General Appraisers, as the case may be, to permit a duly accredited officer of the United States to inspect his books, papers, records, accounts, documents, or correspondence, pertaining to the market value

or classification of such merchandise, then while such failure continues the Secretary, under regulations prescribed by him, (1) shall prohibit the importation into the United States of merchandise manufactured, produced, sold, shipped or consigned by such person, and (2) may instruct the collectors to withhold delivery of merchandise manufactured, produced, sold, shipped or consigned by such person. If such failure continues for a period of one year from the date of such instructions the collector shall cause the merchandise, unless previously exported, to be sold at public auction as in the case of forfeited merchandise.

#### INSPECTION OF IMPORTER'S BOOKS.

Sec. 405. That if any person importing merchandise into the United States or dealing in imported merchandise fails, at the request of the Secretary, or an appraiser, or person acting as appraiser, or a collector, or a general appraiser, or the Board of General Appraisers, as the case may be, to permit a duly accredited officer of the United States to inspect his books, papers, records, accounts, documents, or correspondence, pertaining to the value or classification of such merchandise, then while such failure continues the Secretary, under regulations prescribed by him, (1) shall prohibit the importation of merchandise into the United States by or for the account of such person, and (2) shall instruct the collectors to withhold delivery of merchandise imported by or for the account of such person. If such failure continues for a period of one year from the date of such instructions the collector shall cause the merchandise, unless previously exported, to be sold at public auction as in the case of forfeited merchandise.

#### DEFINITIONS.

Sec. 406. That when used in Title II or Title III or in this title—

The term "person" includes individuals, partnerships, corporations, and associations; and

The term "United States" includes all Territories and possessions subject to the jurisdiction of the United States, except the Philippine Islands, the Virgin Islands, the islands of Guam and Tutuila, and the Canal Zone.

#### RULES AND REGULATIONS.

Sec. 407. That the Secretary shall make rules and regulations necessary for the enforcement of this Act.

## TITLE V.—DYES AND CHEMICALS.

Sec. 501. (a) That on and after the day following the enactment of this Act, for the period of six months, no sodium nitrite, no dyes or dyestuffs, including crudes and intermediates, no product or products derived directly or indirectly from coal tar (including crudes, intermediates, finished or partly finished products, and mixtures and compounds of such coal-tar products), and no synthetic organic drugs or synthetic organic chemicals, shall be admitted to entry or delivered from customs custody in the United States or in any of its possessions unless the Secretary determines that such article or a satisfactory substitute therefor is not obtainable in the United States or in any of its possessions in sufficient quantities and on reasonable terms as to quality, price and delivery, and that such article in the quantity to be admitted is required for consumption by an actual consumer in the United States or in any of its possessions within six months after receipt of the merchandise.

(b) Upon the day following the enactment of this Act the War Trade Board Section of the Department of State shall cease to exist; all clerks and employes of such War Trade Board Section shall be transferred to and become clerks and employes of the Treasury Department and all books, documents, and other records relating to such dye and chemical import control of such War Trade Board Section shall become books, documents and records of the Treasury Department. All individual licenses issued by such War Trade Board Section prior to the enactment of this Act shall remain in effect during the period of their validity, and the importations under such licenses shall be permitted. All unexpended funds and appropriations for the use and maintenance of such War Trade Board Section shall become funds and appropriations available to be expended by the Secretary in the exercise of the power and authority conferred upon him by this section.

Sec. 502. That this title may be cited as the "Dye and Chemical Control Act, 1921."



## TEXT OF SCHEDULE 11, WOOL AND MANUFACTURES OF

FORDNEY TARIFF BILL AS SUBMITTED TO THE HOUSE OF REPRESENTATIVES WEDNESDAY, JUNE 29, 1921

Par. 1101. Wools, not improved by the admixture of merino or English blood, such as Donskoi, native Smyrna, native South American, Cordova, Valparaiso, and other wools of like character or description, and hair of the camel, 28 per centum ad valorem: *Provided*, That the duty shall not exceed 7 cents per pound. The duty on such wools, imported on the skin, shall be 24 per centum ad valorem, but not to exceed 6 cents per pound.

Par. 1102. Wools, not specially provided for, and hair of the Angora goat, alpaca, and other like animals, imported in the grease or washed, 25 cents per pound of clean content; imported in the scoured state, 26 cents per pound; imported on the skin, 24 cents per pound of clean content: *Provided*, That none of the foregoing shall pay a higher rate of duty than 35 per centum ad valorem.

Par. 1103. If any bale or package containing wools, hairs, wool wastes, or wool waste material, subject to different rates of duty, be entered at any rate or rates lower than applicable, the highest rate applicable to any part shall apply to the entire contents of such bale or package.

Par. 1104. The Secretary of the Treasury is hereby authorized and directed to prescribe methods and regulations for carrying out the provisions of this schedule relating to the duties on wool and hair.

Par. 1105. Top waste, slubbing waste, roving waste, and ring waste, 25 cents per pound; garnetted waste, 20 cents per pound; noils, carbonized, 20 cents per pound; noils, not carbonized, 16 cents per pound; thread or yarn waste, and all other wool wastes not specially provided for, 14 cents per pound; shoddy and wool extract, 14 cents per pound; mungo, woolen rags, and flocks, 6 cents per pound.

Par. 1106. Wool which has been advanced in any manner or by any process of manufacture beyond the washed or scoured condition, and not specially provided for, including tops and roving, valued at not more than 40 cents per pound, 16 2-3 cents per pound and, in addition thereto, 10 per centum ad valorem; valued at more than 40 cents per pound, 27 1-2 cents per pound and, in addition thereto, 10 per centum ad valorem.

Par. 1107. Yarn, made wholly or in part of wool, valued at



not more than 55 cents per pound, 20 cents per pound and, in addition thereto, 15 per centum ad valorem; valued at more than 55 cents but not more than \$1.50 per pound, 30 cents per pound and, in addition thereto, 18 per centum ad valorem; valued at more than \$1.50 per pound, 30 cents per pound and, in addition thereto, 20 per centum ad valorem.

Par. 1108. Woven fabrics, weighing not more than four ounces per square yard, wholly or in part of wool, valued at not more than \$1.25 per pound, 30 cents per pound and, in addition thereto, 22 per centum ad valorem; valued at more than \$1.25 per pound, 36 cents per pound and, in addition thereto, 27 1-2 per centum ad valorem: *Provided*, That if the warp of any of the foregoing is wholly of cotton or other vegetable fiber, the duty shall be 25 cents per pound and, in addition thereto, if the fabric is valued at not more than \$1.25 per pound, 22 per centum ad valorem; if valued at more than \$1.25 per pound, 27 1-2 per centum ad valorem.

Par. 1109. Woven fabrics, weighing more than four ounces per square yard, wholly or in part of wool, valued at not more than 75 cents per pound, 20 cents per pound and, in addition thereto, 18 per centum ad valorem; valued at more than 75 cents but not more than \$1.25 per pound, 25 cents per pound and, in addition thereto, 21 per centum ad valorem; valued at more than \$1.25 but not more than \$2.50 per pound, 30 cents per pound and in addition thereto, 24 per centum ad valorem; valued at more than \$2.50 per pound, 36 cents per pound and, in addition thereto, 27 1-2 per centum ad valorem.

Par. 1110. Woven fabrics, wholly or in part of wool, which have been cut to garment or suiting lengths or which have been subject to the process of damping, sponging, or shrinking, shall pay, in addition to the rates hereinbefore provided, 2 per centum ad valorem.

Par. 1111. Pile fabrics, cut or uncut, whether or not the pile covers the whole surface, made of wool or of which wool is a component material, whether or not constituting chief value, and manufactures, in any form, made or cut from such pile fabrics, 36 cents per pound and, in addition thereto, 27 1-2 per centum ad valorem.

Par. 1112. Blankets, wholly or in part of wool, not exceeding three yards in length, plain woven, with not more than one color in warp or filling, and not advanced beyond weaving by any process of finishing, valued at not more than 75 cents per pound, 20 cents per pound and, in addition thereto, 20 per centum ad valorem; valued at more than 75 cents but not more than \$1.50 per pound, 25 cents per pound and, in addition thereto, 20 per centum ad valorem; valued at more than \$1.50 per pound, 30 cents per pound and, in addition thereto, 20 per centum ad valorem.

Par. 1113. Felts, not woven, wholly or in part of wool, valued at not more than 75 cents per pound, 20 cents per pound and, in addition thereto, 20 per centum ad valorem; valued at more than 75 cents but not more than \$1.50 per pound, 25 cents per pound and, in addition thereto, 20 per centum ad valorem; valued at more than \$1.50 per pound, 30 cents per pound and, in addition thereto, 25 per centum ad valorem.

Par. 1114. Fabrics with fast edges not exceeding twelve inches in width, and articles made therefrom; tubings, garters, suspenders, braces, cords, and cords and tassels; if wholly of wool, 36 cents per pound; if in part of wool, whether or not wool constitutes chief value, 25 cents per pound; and, in addition thereto on all the foregoing, 30 per centum ad valorem.

Par. 1115. Knit fabrics, made of wool or of which wool is a component part, whether or not constituting chief value, valued at not more than \$1.25 per pound, 25 cents per pound and, in addition thereto, 20 per centum ad valorem; valued at more than \$1.25 per pound, 36 cents per pound and, in addition thereto, 25 per centum ad valorem.

Hose and half hose, and gloves and mittens, made of wool or of which wool is a component part, whether or not constituting chief value, valued at not more than \$3 per dozen pairs, 30 cents per pound and, in addition thereto, 25 per centum ad valorem; valued at more than \$3 per dozen pairs, 36 cents per pound and, in addition thereto, 30 per centum ad valorem.

Knit underwear, finished or unfinished, made of wool or of which wool is a component part, whether or not constituting chief value, valued at not more than \$2.50 per pound, 30 cents per pound and, in addition thereto, 20 per centum ad valorem; valued at more than \$2.50 per pound, 36 cents per pound and, in addition thereto, 25 per centum ad valorem.

Outerwear and other articles, knit or crocheted, finished or unfinished, made of wool or of which wool is a component part, whether or not constituting chief value, valued at not more than \$2.50 per pound, 30 cents per pound and, in addition thereto, 28 per centum ad valorem; valued at more than \$2.50 per pound, 36 cents per pound and, in addition thereto, 33 1-3 per centum ad valorem.

Par. 1116. Clothing and articles of wearing apparel of every description, not knit or crocheted, manufactured wholly or in part, made of wool or of which wool is a component part, whether or not constituting chief value, valued at not more than \$2.50 per pound, 20 cents per pound and, in addition thereto, 25 per centum ad valorem; valued at more than \$2.50 but not more than \$5 per pound, 25 cents per pound and, in addition thereto, 25 per centum ad valorem; valued at more

than \$5 per pound, 36 cents per pound and, in addition thereto, 30 per centum ad valorem.

Par. 1117. Oriental, Axminster, Savonnerie, Aubusson, and other carpets and rugs, not made on a power-driven loom; carpets and rugs of oriental weave or weaves, produced on a power-driven loom; chenille Axminster carpets and rugs, whether woven as separate carpets and rugs or in rolls of any width; all the foregoing, plain or figured, 5 cents per square foot and, in addition thereto, 30 per centum ad valorem.

Par. 1118. Axminster carpets and rugs, not specially provided for, and carpets and rugs of like character or description, 2 cents per square foot; Wilton carpets and rugs, and carpets and rugs of like character or description, 3 cents per square foot; Brussels carpets and rugs, and carpets and rugs of like character or description, 2 cents per square foot; velvet and tapestry carpets and rugs, and carpets and rugs of like character or description, 1 1-4 cents per square foot; and, in addition thereto, on all the foregoing, 25 per centum ad valorem.

Ingrain carpets, and ingrain rugs or art squares, of whatever material composed, and carpets and rugs of like character and description, not specially provided for, 1 cent per square foot and, in addition thereto, 20 per centum ad valorem.

All other floor coverings, including mats and druggets, not specially provided for, composed wholly or in part of wool, whether or not constituting chief value, 2 cents per square foot and, in addition thereto, 25 per centum ad valorem.

Parts of any of the foregoing shall be dutiable at the rate provided for the complete article.

Par. 1119. Screens, hassocks, and all other articles composed wholly or in part of carpets or rugs, and not specially provided for, 22 per centum ad valorem.

Par. 1120. All manufactures not specially provided for, composed of wool or of which wool is a component part, whether or not constituting chief value, 25 per centum ad valorem.

Par. 1121. Whenever in this title the word "wool" is used in connection with a manufactured article of which it is a component material, it shall be held to include wool or hair of the sheep, camel, Angora goat, alpaca, or other like animals, whether manufactured by the woolen, worsted, felt, or any other process.

Par. 1122. All samples of manufactures of wool which are not admitted under bond for exportation within six months shall be subject to the same rates of duty and the same valuation as the manufactured articles which they are intended to represent.

DEFINITION OF VALUE AS PROVIDED FOR IN THE FORDNEY TARIFF  
BILL, H. R. 7456, JUNE 29, 1921

Values ascertained in this manner are the basis for calculating all ad valorem duties.

Sec. 402. *Value*—Except as otherwise provided by law, the word “value” wherever used in this Act or in any other law relating to the appraisement or the classification of imported merchandise shall mean the price on the date of exportation of the imported merchandise at which comparable and competitive products of the United States were ordinarily sold or freely offered for sale in the usual wholesale quantities and in the customary wrappings, coverings, and containers, whether holding liquids or solids, to all purchasers in the ordinary course of trade, including all costs, charges, and expenses, in the principal market or markets of the United States; or, when such value can not be ascertained to the satisfaction of the appraising officer, shall mean the value of the imported merchandise on said date for sale (whether or not there shall be an actual sale), for consumption or use in the United States in its condition, including wrappings, coverings, and containers, whether holding liquids or solids, as imported. In determining the value for sale, appraising officers may take into consideration, among other matters, the selling price or cost of production of comparable products of the United States and of articles made therefrom or from like imported materials, not sold in usual wholesale quantities or not sold or freely offered for sale to all purchasers in the ordinary course of trade, or not sold at all, and the selling price in the United States of comparable imports, or the selling price or market value or cost of production of the imported merchandise in the foreign country, and may exclude or include all or any costs, charges, and expenses, including duties, and also profits and commission, if any, keeping always in mind the legislative intention that duties ad valorem shall be assessed upon the fair market value of the imported merchandise in the United States. No pretended sale or offer for sale, and no sale or offer for sale tending to establish a fictitious market, shall be held to establish value as herein defined; nor shall a value substantially raised or lowered at the time of exportation otherwise than in the ordinary course of trade be deemed to be such value.

## SUMMARY OF PARAGRAPHS 1101-1113—FORDNEY TARIFF BILL, 1921.

*Par. 1101. Wool—Carpet.*

28% ad val.	7 cents per lb. maximum.
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<i>Wool (carpet) on the skin.</i>	
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24% ad val.	6 cents per lb. maximum.
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*Par. 1102. Wools n. e. s. Including mohair, alpaca, etc.*

Grease or washed:	25 cents per pound of clean content.
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Scoured:	26 cents per pound.
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On the skin:	24 cents per pound of clean content.
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Maximum for each of above three items:	35% ad valorem.
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*Par. 1105. Waste.*

Top, slubbing, roving, and ring waste:	25 cents per lb.
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Garnetted waste:	20 cents per lb.
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Noils (carbonized):	20 cents per lb.
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Noils (not carbonized):	16 cents per lb.
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Thread or yarn waste and other wastes n. e. s.:	14 cents per lb.
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Shoddy and wool extract:	14 cents per lb.
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Mungo, woolen rags and flocks:	6 cents per lb.
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*Par. 1106. Tops.*

Not over 40 cts per lb.:	16 $\frac{2}{3}$ cts. per lb. and 10% ad valorem.
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Over 40 cts. per lb.:	27 $\frac{1}{2}$ cts per lb. and 10% ad valorem.
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*Par. 1107. Yarns.*

Not over 55 cents per lb.:	20 cents per lb. 15% ad valorem.
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Over 55 cents but not over	
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\$1.50:	30 cents per lb. 18% ad valorem.
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Over \$1.50:	30 cents per lb. 20% ad valorem.
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*Par. 1108. Woven fabrics—not over 4 oz. per sq. yd.**Net cotton warp.*

Not over \$1.25 per lb.:	30 cents per lb. 22 % ad valorem.
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Over \$1.25 per lb.:	36 cents per lb. 27 $\frac{1}{2}$ % ad valorem.
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*Ditto—cotton warp.*

Not over \$1.25 per lb.:	25 cents per lb. 22 % ad valorem.
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Over \$1.25 per lb.:	25 cents per lb. 27 $\frac{1}{2}$ % ad valorem.
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*Par. 1109. Woven fabrics weighing more than 4 oz. per sq. yd.*

Not over 75 cents per lb.:	20 cents per lb. 18 % ad valorem.
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Over 75 cents but not over	
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\$1.25 per lb.:	25 cents per lb. 21 % ad valorem.
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Over \$1.25 but not over	
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\$2.50 per lb.:	30 cents per lb. 24 % ad valorem.
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Over \$2.50 per lb.:	36 cents per lb. 27 $\frac{1}{2}$ % ad valorem.
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*Par. 1111. Pile fabrics.*

	36 cents per lb. 27 $\frac{1}{2}$ % ad valorem.
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*Par. 1112. Blankets—not over 3 yds. long.*

Not over 75 cents per lb.:	20 cents per lb. 20 % ad valorem.
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Over 75 cents but not	
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over \$1.50 per lb.:	25 cents per lb. 20 % ad valorem.
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Over \$1.50 per lb.:	30 cents per lb. 20 % ad valorem.
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*Par. 1113. Felts.*

Not over 75 cents per lb.:	20 cents per lb. 20 % ad valorem.
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Over 75 cents but not	
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over \$1.50 per lb.:	25 cents per lb. 20 % ad valorem.
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Over \$1.50 per lb.:	30 cents per lb. 25 % ad valorem.
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## THE FRENCH-CAPPER COMPULSORY BRANDING BILL.

BELOW we print the French-Capper compulsory branding bill which has been introduced into the House by Representative French of Idaho and into the Senate by Senator Capper of Kansas. A number of changes have been made in the text since it appeared last year before the House Committee on Interstate and Foreign Commerce. These are as follows:

In the title the word "profiteering," having served its purpose during the war period and the years immediately succeeding the armistice, disappears from the first line. Now it is a bill which purports "to prevent deceit and unfair prices," etc. "The purpose of the truth-in-fabric law, as outlined in the original draft," according to an article in "Cloverland," presented to the House Committee in support of the bill, "is to protect sheep husbandry from unfair competition with shoddy." This purpose is not now avowed in the new title.

Fearing that the attempt to make the law apply to fabrics "manufactured in any state" might cause this act to be declared unconstitutional, the phrase has been dropped from the title.

In section 2 of the old bill the words "within any state" are deleted.

In section 4, line 6, the words "in any state" have been inserted. In line 9 of the same section the words "or the District of Columbia" have been inserted.

In section 7 the words "or intends to offer such fabrics or garments or articles" of the old bill disappear.

In section 8 the words "any garment or article of apparel purporting to contain wool" of the old bill are dropped after the word "country" and the words "yarn purporting to contain wool or of any woven fabric purporting to contain wool or of any article of apparel made from such woven fabric purporting to contain wool" have been put in their stead.

In section 9 after the words "upon the back" of the old



bill have been inserted the words "or on the selvage," and after the word "legible" the following words have been inserted "and in such form as may be prescribed by the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce." After the word "percentage" the words "by weight" have been inserted and after the word "cloth" all that follows has been stricken out and the following proviso substituted: "Provided that in stating the contents of virgin wool it shall be sufficient to recite 'not less than' a stated percentage of such ingredient, and in stating the contents of shoddy, cotton or silk it shall be sufficient to recite 'not more than' a stated percentage of such ingredient or ingredients."

In section 10 the words "on the back of" after the word "show" have been stricken out and the words "on the fabric" inserted. The following proviso has been added: "Provided, however, that nothing herein shall be construed as requiring a garment manufacturer to place any label or tag on the finished garment, to designate the contents of the linings, interlinings, paddings, stiffenings, trimmings or facings of the garment."

In section 14 the words "the product of the silkworm" have been inserted after the words, "silk fiber."

In section 19 the words "the 1st day of July, 1920," have been stricken out and the words "six months after it shall become a law" have been inserted for them.

The new words are noted by brackets and the full text of the bill is as follows:

#### A B I L L.

To prevent deceit and [unfair prices] that result from the unrevealed presence of substitutes for virgin wool in woven fabrics purporting to contain wool and in garments or articles of apparel made therefrom, manufactured in any territory of the United States or the District of Columbia or transported or intended to be transported in interstate or foreign commerce, and providing penalties for the violation of the provisions of this Act, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That*

this Act shall be known and designated as "The Truth in Fabrie Law."

SEC. 2. That every manufacturer of woven fabrics purporting to contain wool and of garments or articles of apparel made therefrom, within any territory of the United States or the District of Columbia, shall, before offering such fabric or garment or article of apparel for sale, trade, or exchange, or for transportation to any other State or Territory or the District of Columbia, or to any foreign country, cause the said woven fabric to be stamped, and all garments and articles of apparel made therefrom to be tagged in the manner hereinafter provided, and any person who shall violate any provision of this section shall be guilty of a misdemeanor, and for the first offense shall, upon conviction thereof, be fined not to exceed \$500, or shall be sentenced to one year's imprisonment, or both such fine and imprisonment, in the discretion of the court, and for each subsequent offense and conviction thereof shall be fined not less than \$1,000 or sentenced to one year's imprisonment, or both such fine and imprisonment, in the discretion of the court.

SEC. 3. That the introduction into any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia, or from any foreign country, or shipment to any foreign country, of any woven fabric purporting to contain wool which is not stamped as hereinafter provided, or of any garment or article of apparel made therefrom which is not tagged as hereinafter provided, is hereby prohibited, and any consignor thereof or any person who shall receive in any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia, or any foreign country, or having so received, shall deliver in original unbroken packages, for pay or otherwise, or offer to deliver to any other person, any such fabric which is not stamped as hereinafter provided, or which is falsely stamped, or any garment or article of apparel made therefrom, which is not tagged as hereinafter provided or which is falsely tagged within the meaning of this Act, or any person who shall sell or offer to sell in any State or Territory of the United States or in the District of Columbia any such unstamped or falsely stamped woven fabric, or untagged or falsely tagged garment or article of apparel made therefrom, shall be guilty of a misdemeanor, and for the first offense shall be fined not exceeding \$500 or one year's imprisonment, or both, in the discretion of the court, and upon conviction for each subsequent offense shall be fined not exceeding \$1,000 or be imprisoned not exceeding one year, or both, in the discretion of the court.

SEC. 4. That the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce shall make uniform rules and regulations for carrying out the provisions of this Act, including the collection and examination of specimens of woven fabrics and garments or articles of apparel manufactured therefrom, offered for sale [in any State] or Territory or in the District of Columbia, or which shall be offered for sale in unbroken packages in any State or Territory [or in the District of Columbia] other than that in which they shall have been respectively produced or manufactured, or which shall be offered for shipment or intended for shipment in interstate or foreign commerce, or which shall be received from any other State or Territory or the District of Columbia, other than that in which they have been respectively produced or manufactured, or which shall be received from any foreign country or intended for shipment to any foreign country, and shall have power to inspect the plant, raw materials, methods, and the books of all manufacturers of such goods who have secured a registration number as hereinafter provided, and to require reports in such form from such manufacturers from time to time as they may deem necessary, under such rules and regulations as they may prescribe.

SEC. 5. That the examination of specimens of woven fabrics, and of garments and articles of apparel manufactured therefrom, shall be made in the Bureau of Chemistry of the Department of Agriculture or under the direction and supervision of such bureau or the Bureau of Standards, in the Department of Commerce, as the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce may determine, under the rules to be made by them, for the purpose of determining from such examination whether such fabrics or garments and articles of apparel manufactured therefrom are stamped and tagged as hereinafter provided, or are falsely stamped or tagged within the meaning of this Act, and if it shall appear from such examination that such fabrics or garments and articles of apparel manufactured therefrom are either unstamped or untagged or falsely stamped or falsely tagged within the meaning of this Act, the Secretary of Agriculture or the Secretary of Commerce, as the case may be, shall cause notice thereof to be given to the party from whom such sample was obtained. Any party so notified shall be given an opportunity to be heard, under such rules and regulations as may be prescribed as aforesaid, and if it appears that any of the provisions of this Act have been violated by such party, then the Secretary of Agriculture or the Secretary of Commerce, as the case may be, shall certify at once the facts to the proper United States district attorney,

with a copy of the results of the analysis or the examination of such fabric, or garment, or article of apparel manufactured therefrom, duly authenticated by the analyst or officer making such examination, under oath of such officer. After judgment of the court notice shall be given by publication in such manner as may be prescribed by the rules and regulations aforesaid.

SEC. 6. That it shall be the duty of each district attorney to whom the Secretary of Agriculture or the Secretary of Commerce shall report any violation of this Act to cause appropriate proceedings to be commenced and prosecuted in the proper courts of the United States without delay for the enforcement of the penalties in such case herein provided.

SEC. 7. That every manufacturer of woven fabrics purporting to contain wool, and of garments or articles of apparel manufactured therefrom, within any State or Territory of the United States or the District of Columbia, and every such manufacturer in any State or Territory of the United States, or the District of Columbia, or in any foreign country, who offers apparel manufactured therefrom for sale, trade, or exchange in interstate commerce or for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia, or from any foreign country or to any foreign country, shall secure a registration number from the Secretary of Commerce of the United States, and the Secretary of Commerce is hereby given power to make rules and regulations for carrying out the provisions of this section.

SEC. 8. That the introduction into any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia or from any foreign country or shipment to any foreign country of [yarn purporting to contain wool, or of any woven fabric purporting to contain wool, or of any article of apparel made from such woven fabric purporting to contain wool] made by any manufacturer who has not secured a registration number as hereinbefore provided, is hereby prohibited, and any person who shall violate any provision of this section shall be guilty of a misdemeanor, and for the first offense shall be fined not exceeding \$500 or one year's imprisonment, or both, in the discretion of the court, and upon conviction for each subsequent offense shall be fined not exceeding \$1,000 or be imprisoned not exceeding one year, or both, in the discretion of the court.

SEC. 9. That every manufacturer of woven fabrics purporting to contain wool, within any State or Territory of the United States, or the District of Columbia, and every such manufacturer in any foreign country who offers or intends



to offer such fabric for sale, trade, or exchange in interstate commerce or for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia from any foreign country or to any foreign country, shall stamp, or cause to be stamped, upon the back [or on the selvage] of every yard of such woven fabric, in a manner that shall be legible, [and in such form as may be prescribed by the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce,] the following information: The contents of the fabric stating the four following ingredients as herein defined: Virgin wool, shoddy, cotton, and silk, and the relative proportion or percentage [by weight] of each, together with the registration number of the person, firm, or corporation making the fabric or cloth: [*Provided*, That in stating the contents of virgin wool it shall be sufficient to recite "not less than" a stated percentage of such ingredient, and in stating the contents of shoddy, cotton, or silk, it shall be sufficient to recite "not more than" a stated percentage of such ingredient or ingredients.]

SEC. 10. That every manufacturer of garments and articles of apparel manufactured from woven fabric, purporting to contain wool, within any State, or Territory of the United States, or the District of Columbia, and every such manufacturer in any foreign country who offers or intends to offer such garments or articles of apparel for sale, trade, or exchange, in interstate commerce or for shipment from any State, Territory, or the District of Columbia, to any other State, Territory, or the District of Columbia, or from any foreign country or to any foreign country, shall, in addition to having the woven fabric from which said garment or article of apparel is manufactured stamped, as hereinbefore provided, shall have sewn on such garment or article of apparel in a manner and at a place where the same will be easily discernible a white cotton strip of cloth on which shall be indelibly written or printed the precise information contained in the stamp on the fabric or cloth from which such garment or article of apparel was manufactured: [*Provided, however*, That nothing herein shall be construed as requiring a garment manufacturer to place any label or tag on the finished garment to designate the contents of the linings, interlinings, paddings, stiffenings, trimmings, or facings of the garment.]

SEC. 11. That every manufacturer of yarn purporting to contain wool, within any State or Territory of the United States or the District of Columbia, and every such manufacturer in any State or in any foreign country who offers or intends to offer such yarn for sale, trade, or exchange in interstate commerce for pay or otherwise, or for shipment from any

State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia, or from any foreign country or to any foreign country, shall secure a registration number from the Secretary of Commerce of the United States, under such rules and regulations as may be provided.

SEC. 12. That every manufacturer of yarn, purporting to contain wool, within any State or Territory of the United States or the District of Columbia, and every such manufacturer in any State or in any foreign country who offers or intends to offer such yarn for sale, trade, or exchange in interstate commerce, for pay or otherwise, or for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia, or from any foreign country or to any foreign country, shall, at the time he sells or offers to sell, or ships or offers to ship in interstate or foreign commerce such yarn, furnish to the purchaser a statement in writing which shall set forth the contents of such yarn, whether the same contains virgin wool, shoddy, cotton, or silk, as hereinbefore defined, and the proportion and percentage of each of such ingredients, together with a guaranty in writing that the said information so furnished is correct, and every manufacturer of woven fabrics in any State or Territory of the United States or the District of Columbia, and every such manufacturer in any foreign country who purchases or secures yarn from sources other than his own manufacturing plant, and who intends to use such yarn in the manufacture of woven fabrics, for sale, trade, or exchange in interstate commerce, or for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia, or to any foreign country, shall secure such written guaranty from such yarn manufacturer, and any violation of this section by any person shall be a misdemeanor, and upon conviction thereof, for the first offense shall be punishable by a fine of not more than \$500, or one year's imprisonment, or both such fine and imprisonment, in the discretion of the court, and for each subsequent offense shall be punishable by a fine of not more than \$1,000 or one year's imprisonment, or both such fine and imprisonment, in the discretion of the court.

SEC. 13. That yarn purporting to contain wool, woven fabrics purporting to contain wool, and garments or articles of apparel made therefrom, which are being imported into the United States or offered for import, shall, in addition to the other requirements of this Act, be accompanied by a written statement of the manufacturer thereof which shall set forth the contents of such yarn, woven fabrics, garments, and



articles of apparel made therefrom, stating whether the same contains virgin wool, shoddy, cotton, or silk as hereinbefore defined and the percentage of such ingredients, together with a guaranty in writing that the said information so furnished is correct, and in case such written statement and guaranty is not furnished, said yarn, woven fabrics, garments, and articles of apparel made therefrom shall be refused admission to the United States, and the Secretary of the Treasury shall refuse delivery thereof to the consignee, and cause the destruction of any such goods refused delivery, which shall not be exported by the consignee within three months from the date of notice of such refusal, under such rules and regulations as the Secretary of the Treasury may prescribe.

SEC. 14. That the term "virgin wool," as used in this Act, shall mean wool that has never previously been spun, or woven into cloth; the term "shoddy" shall include any material obtained from any fabric or clippings of cloth of any fiber whatever, or secured from rags or from used apparel of any description, or any fiber that has been previously spun, or woven into cloth, as well as wood, hemp, jute, flax, and hair fiber not properly classed as wool of any description and from whatever source obtained; also fur, feathers of every description and from whatever source obtained. The term "cotton" shall mean cotton fiber that has never been previously spun, or woven into cloth, and the term "silk" shall mean silk fiber [the product of the silkworm] that has never been previously spun, or woven into cloth. The term "Territory" shall include the insular possessions of the United States. The word "person" shall be construed to import both the plural and the singular, as the case demands, and shall include corporations, partnerships, companies, societies, and associations. When construing and enforcing the provisions of this Act the act, omission, or failure of any officer, agent, or other person acting for or employed by any corporation, partnership, company, society, or association, within the scope of his employment or office, shall also be deemed in every case to be the act, omission, or failure of such corporation, partnership, company, society, or association as well as that of the person.

SEC. 15. That no retail dealer shall be prosecuted under the provisions of this Act for having in his possession goods not stamped or tagged or falsely stamped or tagged within the meaning of this Act, when he can establish a guaranty signed by the wholesaler, jobber, or manufacturer, or other party residing in the United States from whom he purchased such goods found in his possession, that such goods are truthfully stamped or tagged in conformity with the provisions of this

Act. Said guaranty, to afford protection, shall contain the name and address of the party or parties making the sale of such articles to such dealer, and in such case said party or parties shall be amenable to the prosecutions, fines, and other penalties which would attach in due course to the dealer under the provision of this Act.

SEC. 16. That any woven fabric or garment or article of apparel manufactured therefrom that is not stamped or tagged in accordance with the provisions of this Act or that is falsely stamped or tagged within the meaning of this Act, and is being transported from one State, Territory, District of Columbia, or insular possession, to another for sale, or having been transported remains unloaded, or in original unbroken packages, or if it be sold or offered for sale in any State or Territory of the United States, or the District of Columbia, or if it be imported from a foreign country, or if it be intended for export to a foreign country, shall be liable to be proceeded against in any district court within the district where the same is found and seized for confiscation by a process of libel for condemnation, and if such woven fabric or garment or article of apparel manufactured therefrom is condemned as either not stamped or tagged within the meaning of this Act, or falsely stamped or tagged within the meaning of this Act, the same shall be disposed of by sale as the said court may direct, and the proceeds thereof, if sold, less the legal costs and charges, shall be paid into the Treasury of the United States, but such goods shall not be sold in any jurisdiction contrary to the provisions of this Act: *Provided, however,* That upon the payment of the costs of such libel proceedings and the execution and delivery of good and sufficient bond to the effect that such woven fabric or garments or articles of apparel manufactured therefrom shall not be sold or otherwise disposed of contrary to the provisions of this Act, the court may by order direct that such articles be delivered to the owner thereof. The proceedings of such libel cases shall conform as nearly as may be to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in any such cases, and all such proceedings shall be at the suit of and in the name of the United States.

SEC. 17. That the Secretary of the Treasury shall deliver to the Secretary of Agriculture or Secretary of Commerce, as the case may be, upon his request from time to time, samples of woven fabrics and garments and articles of apparel manufactured therefrom, which are being imported into the United States or offered for import, giving notice to the owner thereof or consignee, who may appear before the Secretary of Agriculture, or the Secretary of Commerce, as the case may be, and have the right to introduce testimony. And if it

appear from the examination of such sample that any woven fabric, garment, or article of apparel manufactured therefrom, offered to be imported into the United States, is either not stamped or tagged, or is falsely stamped or tagged within the meaning of this Act, or is otherwise falsely labeled in any respect, said woven fabric, garment, or article of apparel manufactured therefrom shall be refused admission and the Secretary of the Treasury shall refuse delivery to the consignee, and shall cause to be sold, after being properly stamped or tagged, any goods refused delivery which shall not be exported by the consignee within three months of the date of notice of such refusal, under such regulations as the Secretary of the Treasury may prescribe: *Provided*, That the Secretary of the Treasury may deliver to the consignee such woven fabric or garments or articles of apparel manufactured therefrom, pending examination and decision in the matter, upon the execution of a penal bond for the amount of the full invoice value of such woven fabric, or garments, or articles of apparel manufactured therefrom, together with the duty thereon, and on the refusal to return such goods for any cause to the custody of the Secretary of the Treasury when demanded for the purpose of excluding them from the country or for any other purpose, said consignee shall forfeit the full amount of the bond: *And provided further*, That all charges for storage, cartage, and labor on goods which are refused admission or delivery shall be paid by the owner or consignee, and in default of such payment shall constitute a lien against any future importations made by such owner or consignee.

SEC. 18. That the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce, under such rules and regulations as they may prescribe, may cancel the registration number of any manufacturer of yarn purporting to contain wool, of woven fabric purporting to contain wool, or of garments or articles of apparel manufactured therefrom, who has previously obtained a registration number under the provisions of this Act or may refuse a registration number to any such manufacturer who applies for a registration number who refuses or neglects to comply with any of the provisions of this Act or who has been convicted of a violation of any of the provisions thereof.

SEC. 19. That this Act shall be in force and effect from and after [six months after it shall become a law,] as applied to manufacturers, importers, dealers, or other persons mentioned herein, when manufacturing, importing, or dealing in woven fabric and garments or articles of apparel manufactured from such fabric, or imported into the United States after that date.

## PRESENT TENDENCIES IN WOOL SCOURING.

By LAWRENCE T. FAIRHALL, PH.D.

Wool scouring presents many problems to the wool manufacturer. Two of these problems are the disposal of scouring waste and the recovery of wool grease. The process of wool scouring itself calls for very careful control in all stages of its operation, for a variation in temperature, for instance, may cause severe injury to the wool fibers. The chief end of wool scouring is to remove from the fibers their coating of dirt and grease. This wool grease is secreted by sebaceous glands contiguous to the hair follicles and coats the surface of the individual fibers for the purpose of preventing mechanical injury during growth and matting or felting of the fibers. The hair follicle, in addition to the lymph-like secretion which nourishes the hair during its growth and development, secretes an oily substance, the wool oil, which becomes a constituent of the fiber and imparts elasticity and flexibility. The problem of the wool scourer is to remove the greasy envelope so far as possible, without removing the oil within the fiber. Too high a temperature, too great a concentration of alkali, or (where organic solvents are used to remove the grease) too prolonged contact with the solvent, will yield a fiber that is harsh and brittle, leading to waste in spinning. In addition to grease, the wool fiber is coated with dried perspiration, which consists largely of a mixture of potassium salts, soluble in cold water and amounting to about 8 per cent by weight of the wool.

## WOOL SCOURING IS A PHYSICAL AND NOT A CHEMICAL PROCESS.

The scouring of wool is essentially a physical and not a chemical process. According to an older idea, the alkali added or present, due to the hydrolysis of the soap, acted upon the fat or grease and formed a soluble soap, which was then removed by subsequent washing. In place of saponification, as a matter of fact, what really occurs is an emulsification of the fat by the soapy solution. This is readily apparent when

it is remembered that soapy solutions readily remove mineral oils, which are, of course, incapable of saponification. It is true that the free alkali combines with the small amount of fatty acids present in the grease to form a soap, but the free fatty acid in wool grease amounts to about 1 per cent only, and the saponification of wool grease requires a high temperature and high concentration of alkali. Emulsification, applied to an oil-water mixture, is a means of suspending the oil in a very fine state of subdivision throughout the bulk of the mixture. Certain substances (such as soaps, saponin, and certain proteins) serve to promote and stabilize such an emulsion. If a few drops of oil are shaken with pure water, an emulsion is formed which persists for a few minutes only, for the oil separates out very readily, due to the great interfacial tension between the particles of oil and the medium in which they are distributed. If, however, a small amount of soap solution is added, this interfacial tension is decreased enormously with the result that a more nearly perfect and stable emulsion is formed.

Recently Shorter (1) has shown that so far as the surface tension is concerned it is a waste of soap to use it at a concentration much greater than 0.4 per cent. His experiments on the effect of a soap on the stability of fine emulsions have shown that there is a maximum effect at concentrations from 0.2 per cent to 0.3 per cent and from a study of both effects it is concluded that 0.46 per cent represents the maximum concentration at which it is desirable to use soap for scouring. When scoured with alkali alone, the emulsification is due to the formation in the surface layer of a layer of soap by the interaction of the alkali and the free fatty acid in the grease. The stabilization of the emulsion is due to the passing into solution of the soap thus formed. The alkali must be of sufficient strength to form a soapy solution, but if it is too concentrated the emulsion droplets are coagulated. This coagulating effect seems to occur between concentrations of 1 and 2 per cent. In scouring with alkali alone it is better, therefore, to avoid high concentrations in the initial stage, i.e., until enough soap has been formed and dissolved to produce the necessary stabilizing effect. As scouring proceeds,



the effectiveness of the scouring liquor is decreased by the removal of the soap, due to the emulsion droplets becoming coated with a layer of soap, and to accumulation of dirt and grease in the scouring liquor.

The effective emulsification and stabilization of wool grease is at once the joy and despair of the wool scourer. The grease is readily removed from the wool, but the washings consist of an emulsion from which it is very difficult to remove the grease before diverting it into rivers. The consequence is that streams in the vicinity of many wool scouring establishments are greasy and befouled, vegetation becomes coated with wool fat and the banks of the water course present an uninviting spectacle. The problem is not less complicated by running the scouring waste into municipal sewers, for waste from which the grease had not been removed, when run into sewers has been known to seal the surface of sand filters and put the beds absolutely out of commission. The removal of the grease, requiring the use of acids or other chemicals, on the other hand, should provide also for the neutralization of these chemicals, for if the wastes constitute a large proportion of the municipal sewage, they may have sufficient disinfecting power upon the sewage to render biological treatment difficult.

#### IN WOOL SCOURING VALUABLE MATERIALS ARE LOST.

In addition to the nuisance created by wool scouring waste, it represents a direct loss of valuable material. It has been estimated that in the vicinity of Philadelphia alone from 5,000 to 10,000 pounds of wool fat are wasted in this way daily. Furthermore there is a total loss of the valuable potassium salts contained in the washings.

Where the solvent process of wool scouring is in use (and this is, perhaps, the most modern way of scouring wool) the wool grease is easily recovered by evaporating the solvent, the latter being condensed, of course, and thus used repeatedly. In the present day practice of this method the wool is degreased in closed kiers by means of solvent naphtha, the latter readily dissolving the wool grease without the need of mechanical agitation of the fiber. The kier is flushed several times with naphtha of different degrees of grease content



and is given a final flush with clean naphtha either from the distillery directly, or from a clean reservoir. After the final flushing with solvent, the kiers are swept out by a current of warm, moist air for a considerable time. Humidity and temperature of the air are so controlled, as to insure the abstraction of solvent vapor only, without affecting the natural hygroscopic condition of the wool. The warm air is propelled through an adjustable humidifier and, after passing through the degreasing kier, passes through a condenser, which removes the greater part of its load of solvent. The same current of air is used repeatedly, alternately absorbing and depositing naphtha in its circuit. Following this treatment, which removes all traces of naphtha from the wool, the kiers are opened and the degreased wool discharged. The degreased wool is given a final washing in tepid water in order to remove the potassium salts and dirt.

Carbon disulphide was proposed and used as a solvent for the wool grease in the early stage of development of the solvent process, but was found to stain the wool fiber, owing to the free sulphur always present in the solvent. Later carbon tetrachloride was used. The latter, however, was very difficult to reeover completely from the extraction residue by distillation. Recently Koch (2) has patented the use of chlorinated aliphatic hydrocarbons as a solvent for wool grease.

#### THE SOLVENT PROCESS REGARDED BY MANY AS THE IDEAL METHOD.

The solvent process is regarded by many as the ideal method of scouring wool and, as a consequence, numerous attempts have been made to find the best solvent and to adjust the exact conditions so as to realize this ideal. However, the process, although at present in use by one large establishment in this country handling over a million pounds of wool a week, has not come into general use, due perhaps to the costly and complex equipment necessary. The process itself, however, is economical and efficient and has the further incidental advantage of recovering the wool grease, instead of wasting it into the water courses. Since by far the greatest amount of wool is still scoured by means of soap and alkali, it is with

the problems of the latter that most manufacturers are concerned at present.

Where rigorous legislation against the pollution of rivers with wool scouring waste has been brought to bear, as in the thickly populated countries in Europe, more or less successful attempts have been made to recover the grease. One of the early methods practiced in Germany was to run the waste liquors into vats, after which lime or magnesium or calcium salts were added. This precipitated the grease so that it could be collected, pressed in suitable filter presses and dried by exposure to air. This substance, known as suinter, when subjected to destructive distillation in iron retorts, yielded an illuminating gas known as "Fett-gas." Although this eliminates the contamination of water supplies, this method is a wasteful one in that the wool grease is destroyed and no attempt made to recover the potassium salts.

Numerous other methods of grease recovery have been developed and used, notably that method in which the scouring waste is treated with mineral acids in order to coagulate the grease, and that involving extracting suinter, or even the scouring liquor directly, with organic solvents. The former process used at the Yorkshire mills for the production of "Yorkshire grease" consists in collecting the scouring wastes in large cisterns, where the dirt, sand, etc., are allowed to subside and the liquid subsequently acidified with mineral acid. The wool grease, together with the free fatty acids, rises to the surface, when it is skimmed off and allowed to drain on coke beds in order to remove most of the water. It is then given a hot pressing in an hydraulic press. The press cakes usually retain 15 to 20 per cent of the grease, so that extraction with a suitable solvent is sometimes profitable. The acid liquors that run off contain a notable amount of grease in suspension and, of course, the potassium salts.

Extraction with organic solvents is usually very effective so far as the grease is concerned, but in some cases is complicated by the formation of troublesome emulsions. Other means of separating the grease are by saturating the waste liquors with sulphur dioxide or carbon dioxide from flue gas, and the battage process, which consists in mechanically agitat-

ing the liquor so as to produce foaming and then separating the foam which carries a large proportion of the wool grease.

The Smith-Leach process (3), which provides for the recovery of wool grease without the use of solvents or of mineral acids, has the advantage that no effluents which pollute the river courses are obtained. The wool washing liquors are concentrated in a multiple vacuum apparatus until a concentrated, viscous liquid is obtained. The latter is then run through a centrifuge while still warm. By this means the soap liquor, containing the potash salts and the soaps used in the scouring process, is run off. The potassium is recovered as carbonate by further concentration and the calcination of this product, while the wool grease is purified and sold as lanolin.

From time to time other methods have been developed—many aiming at grease recovery only, while others more ambitious still seek to recover both grease and potash from the effluent. The higher cost of potash recovery is due mainly to the cost of concentrating the liquors. However, with the scarcity of potash and the high price level maintained during the war its recovery could be made very profitable, while the claim has been made that even at pre-war prices a grease and potash recovery plant could be operated at a profit.

#### RECENTLY MODIFICATIONS OF OLDER METHODS HAVE BEEN SUGGESTED.

Many of the processes proposed within recent years are merely modifications of older methods. A few, however, have the merit of originality. Invention is constantly stimulated by the common realization that the wastage of wool scouring liquors into our water courses is a procedure that will some day no doubt be restricted by law, while the wool scouring waste itself is a potential source of wealth.

While it would be tedious and unnecessary to describe in detail all the methods developed within recent years, there are a few that merit more than passing attention. It is safe to say that no one method is universally applicable. The recovery process must be adapted to the peculiar needs of each locality.

The tendency appears to be in the direction of separating the grease by purely mechanical means, typified by a process in which frothing is produced by means of compressed air or other gas (4), and by the various centrifugal processes. The latter particularly seem to find favor, since separation of the grease is very effectively carried out with the high speed centrifuges now available.

The recent work of Ayers (5), using a high speed centrifuge has shown that a scouring water containing 1.55 per cent of wool fat would yield 1.45 per cent, or 10 to 11 pounds of fat per hour at a temperature of 145 degrees F. The product was bright yellow, contained little water, and offered fewer purification difficulties than the fat from any other recovery. The purification of the product can be effected by a combination of washing and chemical bleaching agents.

The cost of potash and grease recovery from scouring waste will depend of course upon local conditions and a number of other factors. Some estimate of this cost is given in a recent paper on potash recovery by Weston. The method recommended by Weston (6) is centrifugal separation of the fat from the scouring waste and the concentration of the machine effluent in a multiple effect evaporator, or in a Cardem wet chamber. The concentrate is then degreased with an immiscible solvent, in order to remove the residual fat, and the aqueous concentrate dried and incinerated in open pans. The residue obtained in this way may contain as high as 50 per cent  $K_2O$ . The cost of such a process is summarized by Weston as follows:(7)

“The average wool scouring plant probably has two trains of bowls discharging 12,000 gallons, or 200,000 pounds of waste daily. The cost of a plant for the disposal of this waste will vary greatly with conditions, but will rarely, if ever, exceed \$40,000 even at the present high prices. The 200,000 pounds of waste will, on the average, contain 4000 pounds of grease and 2500 pounds of potash, and there may be recovered therefrom 2000 pounds of centrifuged grease and 1600 pounds of potash. The cost of operation is approximately as follows:

	per diem
Cost of centrifugal process .....	\$45
Cost of evaporation .....	48
Cost of degreasing .....	35
Cost of coking .....	17
Management .....	20
Total .....	<hr/> \$165

*Value of Products*

2000 lbs. of centrifuged grease at 10¢ .....	\$200
1750 lbs. of extracted grease at 8¢ .....	140
1600 lbs. of potash at 17.5¢ .....	280
Total .....	<hr/> \$620
Daily profit .....	\$455

“This profit may seem large, but one mill operating three trains of bowls is at present making a profit of \$500 a day on its centrifugal grease alone. At pre-war prices, the cost of operation would be slightly less and the value of the products \$184, thus leaving a small profit for a plant of this size. In the case of a small, single train plant, the pre-war price would have been a nominal one, but the stream would have been kept clean and valuable products would have been reclaimed from a waste otherwise a nuisance. It must be borne in mind that when potash is recovered no waste is discharged into the stream, and even the degreasing plant alone greatly improves the character of the polluted stream.”

Among other developments in the utilization of the material in wool scouring waste are the use of the centrifuge to recover the wool fat and the utilization of this fat, together with recovered potash, for the formation of a soap to be used as a detergent in subsequent scouring operations (8); application of the process formerly in vogue of recovering potassium carbonate from water in which wool is given a preliminary washing before scouring (9); the formation of insoluble soaps by treatment with magnesium sulphate under heat and pressure and subsequent recovery of the fats (10); the use of a patented filtering device for separating the fat from the scouring waste (11); the separation of the various greases by heating the scouring waste under pressure (12); the re-



covery of neutral wool fat by means of solvents (13); and the method proposed by Chambers (14) of using the waste liquor over again for scouring purposes after having removed the grease. This cycle of operation is repeated until the scouring liquor is sufficiently rich in potash salts to make evaporation profitable. The last process has three outstanding advantages: (a) an expensive evaporating plant is not necessary; (b) by repeatedly using the same liquor in the bowls a great saving is effected in scouring materials, and (c) the plant is of very simple design.

These developments have been concurrent with the demand for conservation of the materials present in wool scouring waste—a demand that was greatly intensified during the war when our supply of potash was practically cut off (15). It is apparent that our present tendency of manufacturing goods with the least margin of waste and the standardization of products and of manufacturing operations, which has permitted us to compete so successfully against cheap labor, is being slowly amplified so as to take care of waste material itself—a position into which many industries in the older countries were forced only by legal necessity. Certainly the utilization of waste material itself in many industries is second in importance only to the conversion of raw materials into manufactured products and is in some measure an index of national prosperity.

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## Obituary.

### ABIEL J. ABBOT.

ABIEL J. ABBOT, a well-known figure in the worsted industry of Massachusetts, died at the Corey Hill Hospital, Brookline, on May 1, 1921.

Born in Westford, Massachusetts, January 8, 1850, the youngest son of J. W. Pitt and Catharine Rowell Abbot, he was descended from old New England stock, his first American ancestor coming to this country in 1640 and settling in Andover, Massachusetts. In 1735 some of the family moved to Westford and have lived there ever since. One John Abbot, a captain, commanded the Westford troop in the battle of Bunker Hill in 1775. Another John Abbot in 1843 laid the cornerstone of the monument commemorating that battle.

Mr. Abbot studied at Westford Academy, Highland Military Academy, Worcester, Massachusetts, and at Exeter Academy, and in 1868 was graduated as a special student from the Massachusetts Institute of Technology. At the age of eighteen he entered the office of the Robey Manufacturing Company, manufacturers of edge tools, at Chelmsford, remaining with that company until 1873, in which year he resigned his position to become associated with the firm of Abbot & Company, worsted spinners, a business founded by his father, his oldest brother, John W. Abbot, and Charles G. Sargent. Three years later he became a partner and so continued until 1900 when the business was incorporated as the Abbot Worsted Company, of which he was made treasurer and continued in that capacity until he retired from active business in 1916. From 1895 to 1910 Mr. Abbot served on the Executive Committee of the National Association of Wool Manufacturers, being greatly interested in the work of the Association.

While much occupied with the responsibilities of his business, Mr. Abbot found opportunity to devote time to the various organizations of the town in which he lived. In church affiliations he was a Unitarian, being for twenty-seven years a member and clerk of the Executive Committee of the First Parish Church of Westford. For three years he was chairman of the Board of Trustees of the Westford Public Library, and in June, 1879, he was elected trustee,



ABIEL J. ABBOT.



and in June, 1895, treasurer of Westford Academy, continuing in that position until his death.

The advice which Mr. Abbot gave to young men to be diligent in all things, upright in business, scrupulous in speech and habits, and unselfish, not always thinking of themselves, but of their obligations to their fellows and their duty to be helpful to the community about them, he scrupulously followed himself. He was the soul of honor and died respected by all who knew him.

On April 22, 1880 at Newburyport, Massachusetts, he married Alice, daughter of Edward Strong and Charlotte Chapman Moseley. She and a daughter, Mrs. George O. Clark of Boston, and two sons, Edward M. Abbot, vice-president of the Abbot Worsted Company, Graniteville, Mass., and John M. Abbot, Treasurer and Manager of the Park Worsted Mills of Lowell, survive.

## Editorial and Industrial Miscellany.

### THE FORDNEY TARIFF BILL AS INTRODUCED IN THE HOUSE

THE Fordney Tariff Bill of 1921 was submitted to the House of Representatives by the Committee on Ways and Means on June 29. So far as the wool and wool products schedule is concerned, the outstanding feature is its inconsistent and haphazard character. It can be deduced from internal evidence that whoever drew the schedule was wholly unfamiliar with the wool manufacturing industry. Moreover, whoever drew the schedule was not able for one cause or another to hold consistently to any definite policy. The only apparent underlying principle, if the schedule has one, is that the rates should be high on raw materials and as low as possible on manufactures.

The duty on clothing wools is put at 25 cents a pound regardless of the fact that the price of these wools in the American market will range from less than 10 cents to more than one dollar per pound. The proviso limiting the amount to 35 per cent of the American value of the wools is all that keeps the wool duty from reaching indefensibly high *ad valorem* equivalents on wools of low value. Granting that the wool growers are entitled to a maximum of protection and that the maximum permissible in any schedule is the Payne-Aldrich rate, the course of obvious wisdom would have been to put the duty on unmanufactured wool on that basis.

With international competition in wool manufactures what it is, and with the prospects for the recovery in the immediate future of formidable European competitors of American mills what they are, this cannot be considered a safe time for any experiments or for putting the American prices of raw materials materially above the world price levels. Neither is the present period of liquidation any time for trying out a policy which will inevitably increase the cost of necessary fabrics of low and medium price.

If a flat rate of duty on the scoured content is to be adopted, it ought to be put sufficiently low to leave it possible for American mills to run. Otherwise, such wool as is grown will need to be taken to London for sale. If a flat rate of anything like 25 cents per pound is to be adopted, then the only safeguard is the setting



of an ad valorem maximum, as was done by the committee. The real mistake, however, was in the adoption of the flat rate of duty for a product with extreme variations in value. The flat rate which was adopted put the ad valorem equivalents of the wool duty far above those ever levied in any former wool schedule. The remedy for this situation in connection with the wool duty is to return to the system of collecting wool duties which has been in successful operation for over half a century. Put the duty on the grease wool with proper corresponding rates for washed and scoured wool.

The most conspicuous fact about the rates on manufactures is that they are not protective. They are merely revenue rates. The only explanation for the schedule as it stands is that which accounts for some of the minor inconsistencies in the manufactured goods schedule, namely, that in its present form it was the result of hasty attempts to reconcile conflicting opinions. There seems to be no other adequate explanation, for example, for a compensatory duty on tops less than the duty on an equal weight of scoured wool.

The great objection to the rates on wool manufactures, however, does not lie in these minor shortcomings. The real trouble is that the duties on manufactures have been set with no apparent purpose except to keep under the Payne-Aldrich schedule. This purpose has been pushed so far that the preservation of any shred of a protective policy in these rates has been lost sight of.

The change in the basis for calculating duties from the foreign to the American valuation considerably obscures comparisons between the former protective rates and those in this schedule. It is possible, however, to arrive at a comparison by means of a little plain arithmetic. Assuming that the compensatory duties will be evenly compensatory, the rates of protection as provided in the proposed schedule are almost uniformly lower than in the Wilson-Gorman law of 1894, which at that time represented the Democratic idea of tariff for revenue only. Throughout the schedule the duties provided keep barely above those of the Democratic Underwood-Simmons law of 1913, and in some instances the rates are below the rates of that law.

The Republican party may find it expedient to abandon the principle of protection. It may even find it desirable to declare for a high protective tariff on raw materials and a revenue tariff on manufactures. Some of the party's consistent adherents feel, however, that any such change of front ought to be clearly declared in the platform and not developed after election day.

## FORDNEY TARIFF BILL PASSED BY THE HOUSE

THE Fordney tariff bill, which was introduced into the House of Representatives on June 29, 1921, was passed by the House on July 21, by a vote of 289 to 127, precisely the vote by which a Democratic motion to eliminate the provision for American valuation was defeated. Party lines did not hold, seven Republicans voting against the measure and seven Democrats voting for it. The Republicans voting against the bill were Beck, Lampert, Voigt, and J. M. Nelson of Wisconsin; Gahn and Knight, Ohio, and Sinclair, North Dakota. The Democrats voting for it were Campbell, Pennsylvania; Dupre, Martin, Favrot, and Lazaro, Louisiana; and Lea and Raker, California.

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## THE NATIONAL SHEEP AND WOOL BUREAU—AN ANNEX OF STRONG, HEWAT &amp; CO.

THE National Sheep and Wool Bureau held its annual meeting on June 20, 1921, in Chicago. According to an Associated Press dispatch printed in the *Daily News Record* of June 21, "only a few of the members were present, many being represented by proxies. A committee consisting of J. B. Wilson, J. F. Walker, and George M. Wilber submitted the list of officers who were elected without opposition." J. B. Wilson, Secretary of the Wyoming Wool Growers Association and a son of Dr. J. M. Wilson, President of the Wyoming Wool Growers Association, was elected vice-president and is acting secretary, succeeding Howard E. Greene, recently resigned. Frank B. Van Saun, Chicago manager of Strong, Hewat & Co., was re-elected treasurer.

With Alexander Walker, vice-president of Strong, Hewat & Co., as president of the Bureau, Frank B. Van Saun, Chicago manager of Strong, Hewat & Co., as treasurer, and George D. Briggs, of New York, advertising manager of Strong, Hewat & Co., as a director, there is a very strong flavor of Strong, Hewat & Co. in the organization. The New York address of the Bureau, by a curious coincidence, is the same as that of Strong, Hewat & Co.

It is this Bureau which is pushing the ill-conceived and ill-considered so-called Truth in Fabric bill in Congress, and it is highly important to bear in mind the dominating influence of Strong, Hewat & Co. in the organization when considering the weight to be given to its support.

It will be recalled that this same Mr. Briggs was quoted in the *Daily News Record* of February 5, 1921, as having said respecting this virgin wool campaign: "I think it will be generally agreed that the virgin wool campaign, as sponsored by Strong, Hewat & Co., for the advancement of truth in fabrics, has been a successful selling idea."

It was Mr. Briggs who mustered the witnesses at the recent hearings before the Sub-Committee of the Senate Committee on Interstate Commerce.

It was Mr. Alexander Walker, vice-president of Strong, Hewat & Co., who presented an elaborate brief to the House Committee on Interstate and Foreign Commerce and who besides making a long statement to the Senate Sub-Committee, furnished much of the material for the presentation made by Senator Capper.

It was the same Mr. Briggs who closed the argument before the Senate Sub-Committee with an address which was continued for most of the last day. It covered more than one hundred pages of the stenographic report, and was filled with tiresome repetitions of threadbare and time-worn assertions.

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### SCOURING FAR FROM CONSUMING CENTERS INADVISABLE.

LITTLE was heard during the year of the movement to establish a scouring plant in Utah or Wyoming, perhaps because the conditions did not favor the enterprise. Enforcing our suggestions made in last year's Review of the objections which must be overcome before sponsors for the enterprise could hope for success, it may be well to call attention to the report of the Central Wool Committee in Australia, where it is urged, as it is in this country, that the scouring should be done in the place of production to save freight charges on dirt. In the resumé of the activities of the Committee, Sir John M. Higgins said respecting the scouring of wools in the Commonwealth:

It seems to be held in some quarters that but very little greasy wool should be exported from the Commonwealth, and that it should all be scoured prior to shipment. The experience of the Central Wool Committee confirms that of pre-war wool buyers, and has proved beyond all doubt that the British and European markets for Australian scoured wools are limited. As a matter of fact, quite a number of big manufacturers refuse to buy wool in a scoured state, and much of the Australian scoured wool sold during the past year at auction in London by the Imperial Government would have shown a better return if submitted in the grease.

Commenting on this statement the *Bradford Wool Record* recently said:

That is a correct account of the position, and Sir John M. Higgins, of Australia, cannot be accused of undue sympathy with the interests of users as opposed to those of the growers. We have not got the actual figures, but we should say that not more than 10 per cent,—if so much—of the Australian wool came to Europe in the scoured state before the war. The bulk of the comparatively small quantity of scoured wool consisted of pieces, bellies, and locks. In the first instance these had been bought up country, then reclassified, and in order to make them look smarter they were sent to some local scourer in the country, or so treated in Brisbane, Sydney, Melbourne or Adelaide. For those particular classes of raw material it was the correct thing.

Everyone connected with the trade knows how delicate a merino wool fibre is, and how easily it can be damaged. The whole principle of wool manufacture is to take a staple and so humor it through the different processes of manufacture that it will come into the finished piece as near its natural state as possible. When wool has been scoured, either in Australia or in Bradford, it is very different from the natural greasy wool, and when, in addition, it is packed into a bale and dumped, the fibres are less amenable to treatment, particularly in the case of combing fleece. In the worsted industry the wool should be scoured and passed right through to the top without being handled in a rough way, as is inevitable when it is repacked and dumped. The scoured fibre on being opened out may appear the same to the untrained eye, but experience proved half a century ago that if maximum results are wanted in the combed top the comb must start with the wool in the greasy state.

The natural grease in the wool fibre is there to preserve it from injury, for without yolk in the staple the growing fleece would codd and be half ruined. When wool is baled in the grease it opens out in the mills of Europe without the fibres being injured in the least. It can then be sorted with ease, and passed through the scouring and combing processes with little or no injury to the fibres.

Moreover, fleeces shipped in the grease retain their spinning properties better than those which have been scoured. Seldom does a top-maker look at scoured merinos or even crossbreds, and probably not 5 per cent of Australian scoured wool is ever used in Bradford for top-making purposes. A top combed out of greasy wool "draws" better than one combed out of scoured, although they are of the same quality. The one is more fluffy, and there is not the same appearance nor the same handle, and certainly not the same elasticity and spinning value in the scoured wool. Any spinner will confirm the statement that there is distinctly more waste in the spinning of a top made from scoured merinos, simply because there is not that cohesion in the fibres—they do not bind together—and the manufacturer also knows at once that there is something wrong with the yarn.

ATTACKS UPON WOOL MERCHANTS AND  
WOOL MANUFACTURERS.

DURING the past year attacks were made upon wool merchants and wool manufacturers in which they were charged with having caused the plight in which the wool growers found themselves, responsibility for which must not be attributed to these fellow sharers in a common misfortune but to rapidly falling prices for wool in the world's markets.

A western banker writing to a Boston textile paper in December, after citing the well-known fact that the cost of feeding the sheep and raising the clip was more than the prices offered for the animals or the wool, asserted that "the wool dealers and textile manufacturers are feeling out the flockmasters as to their attitude toward twenty to twenty-five cents per pound wool." Then he asked, "Who is it that is saying that the flockmasters must accept 25 cents for his wool?" and boldly answered his question by asserting: "It is no one else than the wool dealer and the textile manufacturers. It is these who have put their heels on the necks of the flockmasters determined to crush his very existence from the face of the globe."

To state the assertion is to show its absurdity and that it came from a super-heated brain which prevented its owner from seeing straight. The dissemination of such assertions by men of standing in their communities serves no useful purpose and stirs up resentments which result in grievous injury not only to the men unjustly attacked but to those in whose supposed interest the attack is made.

The destruction of the domestic wool grower who furnishes the commodity in which the wool merchants deal, could not but seriously injure both the wool merchant and the wool manufacturer, the latter of whom relies greatly for his raw material upon the wools grown in the United States. He is not anxious to beat down the price of wools, being interested primarily in the cost of his raw material only so far as it enables him to meet competition in the sale of his products, and he is always more than willing that the producer of his raw material shall make a profit, if that is possible under market conditions.

Even so well informed a man as the president of the National Wool Growers' Association made an unfortunate and we believe an unfounded attack upon the wool manufacturers in his address at the fifty-fifth annual meeting of the Association at Salt Lake City in January, 1920, when he said: "The wool grower need not look for any sympathy from the controlling manufacturers in the United States. We have come to learn that he sees no side of the question



but his own. At a conference of wool growers, manufacturers and clothiers, held at Washington in the last of November, 1918, the manufacturers' attitude toward the wool growers was one of absolute indifference if not of antagonism. The manufacturers' representatives likewise refused to recognize the dangerous conditions which faced the clothiers and retailers. Such an attitude is wholly selfish and full of ultimate danger to the manufacturer."

No good can come to the wool grower or to the wool merchant or to the wool manufacturer from such baseless charges as are here noted. Past experience has always shown that injury and losses have been experienced when enemies or mistaken friends, or both, have estranged the wool growers and the wool manufacturers and arrayed them against each other. They are necessary—the one to the other—and if the one is hurt for any length of time, the other is bound to be both inconvenienced and injured. The fewer such attacks, the better it will be for both.

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#### THE PANACEA PROPOSED BY MR. REYNOLDS.

MR. W. W. REYNOLDS, an Ohio man, has a complete remedy for the lower wool prices now ruling throughout the world. He seems to believe that the wool growers' and the wool merchants' present plight is due solely to the use of reworked wool in the making of woollens. He makes that bald assertion but produces no evidence of value to prove his case; it all depends upon his fiat. But he has a panacea or two for the trouble. One is to compel the branding of all wool fabrics! The other remedy is to convince the wool growers of Australia and Argentina of the folly of sending "the world clip to a handful of capitalists on two little patches of Atlantic seaboard," and to show them the wisdom of consuming all their supplies at home. He declares that "not one pound should leave the Island except in bolts and clothing." "Made in Australia" from "Australian virgin wool" will sell, he asserts, "every pound of it in textiles at three times what the growers get this way and the mills of the northern hemisphere will be scrambling for supplies." If this slogan suggested by Mr. Reynolds will perform the miracle he says it will of selling every pound of the immense clip of Australia in textiles, why should he not recommend the same slogan for use in the United States? Or does he think it will work one way in Australia and another way in this country? If it is to work like a charm in Australia what is the use of attempting to force Congress to pass the compulsory branding bill?



But in this recommendation to Australian wool growers Mr. W. W. Reynolds is just about as trustworthy an adviser as he is in his diagnosis of what ails the wool industry here. Readers of his article need not expect the transformation to occur in the immediate future. Users of Australian wools in Great Britain and the United States need not quake in their boots for fear that their customary supplies are to be lost before their mills can be turned to other uses, for there is no immediate prospect that Australia's wool manufacturing establishments will be so expanded or so multiplied as to consume all of their immense production and not allow a pound to leave the Island "except in bolts and clothing."

It is true that within recent years there has been some expansion in the Australian wool manufacture. Even with that expansion only about three per cent of the wool produced in the country is consumed there. Mr. Reynolds seems to think that it would be an easy matter to get the needed capital for the great expansion, the necessary supplies of skilled help, and to make in Australia and Argentina the kinds of cloth demanded by the styles prevalent in the countries containing the populations with expensive tastes and the wealth to gratify those tastes. If the advice given by Mr. Reynolds to the wool growers of the United States is no better than the suggestions made to the Australian wool growers, it is safe to say they will not get out of their difficulties speedily, but will sink deeper into the slough of despair which some recently seemed to think threatened to engulf them.

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#### THE UNITED STATES CENSUS FOR 1919.

THE returns of the census taken in 1920, covering the year 1919, are being tabulated as rapidly as possible by the Census Bureau in Washington and the results in the form of preliminary bulletins, which will be subject to such changes as may be necessary from further studies of the original reports, are being issued from time to time.

It must be remembered that the year 1919 was not one which those interested in industries would have chosen as fairly representative of the state of the wool manufacture. After the armistice business was upset by the sudden change from a war to a peace basis and by a considerable strike in the worsted branch in Lawrence which slowed down production. High prices prevailed and total values are necessarily swelled beyond their normal size.

We present herewith the preliminary reports on the manufacture of carpets and rugs, wool shoddy, and woolens and worsteds.

## MANUFACTURE OF CARPETS AND RUGS.

This covers the production of carpets and rugs except those made of jute, rags, and grass fiber as a primary product of an establishment. The report says:

Of the 73 establishments reporting for the industry in 1919, over one half, or 47, were located in Pennsylvania, 10 in New York, 9 in Massachusetts, 5 in New Jersey, and one each in Connecticut and Wisconsin. In 1914, there were 97 establishments reporting for this industry.

The statistics for 1919 and 1914 are summarized in the following statement:

## COMPARATIVE SUMMARY OF STATISTICS FOR THE CARPET AND RUG INDUSTRY: 1919 AND 1914.

	Square yards		Value	
	1919	1914	1919	1914
Value of products . . . . .	....	....	\$123,116,000	\$69,128,000
Carpets and Rugs . . . . .	51,991,000	66,340,000	\$110,077,000	\$64,683,000
Carpets, total . . . . .	11,972,000	17,311,000	\$23,569,000	\$15,187,000
Axminster and Moquette. . . . .	2,024,000	1,451,000	\$4,966,000	\$1,849,000
Wilton (Jacquard) . . . . .	1,228,000	1,901,000	\$4,523,000	\$3,547,000
Brussels (Jacquard) . . . . .	149,000	694,000	\$219,000	\$1,030,000
Tapestry:				
Velvet . . . . .	4,376,000	4,856,000	\$9,319,000	\$4,814,000
Brussels . . . . .	2,000,000	2,613,000	\$2,656,000	\$1,706,000
Ingrain . . . . .	1,206,000	5,796,000	\$1,055,000	\$2,241,000
All other . . . . .	989,000	....	\$831,000	....
Rugs, sewed strips, total . . . . .	12,364,000	20,855,000	\$34,586,000	\$25,945,000
Axminster and Moquette. . . . .	7,210,000	9,638,000	\$14,996,000	\$10,659,000
Wilton (Jacquard) . . . . .	2,954,000	3,574,000	\$14,584,000	\$8,016,000
Brussels (Jacquard) . . . . .	636,000	2,001,000	\$1,969,000	\$2,956,000
Tapestry:				
Velvet . . . . .	1,292,000	2,914,000	\$2,301,000	\$2,437,000
Brussels . . . . .	117,000	2,728,000	\$562,000	\$1,877,000
All other . . . . .	155,000	....	\$174,000	....
Rugs, woven whole, total . . . . .	27,655,000	28,174,000	\$51,922,000	\$23,551,000
Axminster and Moquette. . . . .	5,466,000	4,653,000	\$15,541,000	\$6,071,000
Wilton (Jacquard) . . . . .	777,000	141,000	\$4,324,000	\$367,000
Tapestry:				
Velvet . . . . .	4,197,000	5,458,000	\$9,006,000	\$5,616,000
Brussels . . . . .	7,879,000	8,274,000	\$9,901,000	\$6,270,000
Ingrain Art Squares . . . . .	750,000	3,177,000	\$715,000	\$1,165,000
Smyrna . . . . .	808,000	822,000	\$1,914,000	\$871,000
Chenille—Axminster . . . . .	310,000	178,000	\$2,527,000	\$715,000
Wool and paper fiber . . . . .	6,829,000	4,169,000	\$6,248,000	\$1,543,000
Colonial or rag . . . . .	290,000	....	\$505,000	....
All other . . . . .	349,000	1,302,000	\$1,241,000	\$933,000
All other products . . . . .	....	....	\$13,039,000	\$4,445,000

## MANUFACTURE OF WOOL SHODDY.

The preliminary statement of this industry, issued May 17, 1921, shows that there were 78 establishments reporting the manufacture

of wool shoddy for 1919, distributed by states as follows:—Massachusetts 23, New York 14, Connecticut 9, Pennsylvania 9, Rhode Island 7, Maine, Ohio, and Vermont 3 each, Illinois, New Jersey, and Wisconsin 2 each, and 1 in Tennessee.

The statistics for 1919 and 1914, are summarized in the following statement:

COMPARATIVE SUMMARY OF STATISTICS FOR THE WOOL SHODDY INDUSTRY: 1919 AND 1914.

	1919	1914
Number of establishments .....	78	64
Total value of products .....	\$23,254,000	\$7,707,000
Recovered wool fiber:		
Pounds .....	58,859,000	43,156,000
Value .....	\$20,644,000	\$5,977,000
All other products, value <sup>1</sup> .....	\$1,511,000	\$1,323,000
Amount received from contract work.....	\$1,099,000	\$407,000

<sup>1</sup> Includes carbonized rags, cotton shoddies, and mattress shoddies to the value of \$23,000 in 1919 and \$663,000 in 1914. Products of this character were produced almost entirely on a contract basis during 1919; therefore, the amount received by establishments performing such work has been included in "Amount received from contract work."

These figures for quantity of reworked wool produced are not so trustworthy a measure of the use of reworked stock as the complete census figures for the wool manufacture will be when available. They show, however, that whereas in 1914 the poundage of such stock produced was 8.1 per cent of the poundage of new wool retained in the United States for consumption, it was 8.19 per cent in 1919, surely not an alarming increase in view of the conditions prevailing, which would have a tendency to make a temporary increase not surprising.

THE MANUFACTURE OF WOOLEN AND WORSTED GOODS.

The preliminary statement for these branches of the wool manufacture shows that in 1919 there were 568 woolen and 282 worsted goods establishments reporting \$374,556,000 and \$678,484,000 respectively as the total value of products. The combined value of products, \$1,053,040,000, represents 86 per cent of the total value of manufactures of wool in the United States. The other industries forming a part of the wool manufacture's group are, carpets and rugs (other than rag), felt goods, and wool-felt hats, for which preliminary statements have previously been issued.

The distribution of the establishments by states for the woolen and worsted goods industries combined was as follows:—Pennsylvania, 197; Massachusetts, 182; Rhode Island, 88; Maine, 66; Connecticut and New Hampshire, 43 each; New York, 39; New Jersey, 26; Wisconsin, 24; Vermont 18; Ohio and Tennessee, 13 each; Virginia, 12; Indiana and Minnesota, 11 each; Kentucky, 10; Michigan, 9; West Virginia, 7; Oregon, 6; North Carolina and Illinois, 5 each; Georgia, 4; Maryland and Washington, 3 each; California, Delaware, Iowa, Missouri and Utah, 2 each; and South Carolina and Texas, 1 each.

## WOOLEN AND WORSTED GOODS INDUSTRIES—COMPARATIVE SUMMARY—1919 AND 1914.

	1919	1914
Number of establishments .....	850	799
Value of products .....	\$1,053,040,000	\$379,484,000
All-wool woolen suitings, dress goods, overcoatings and cloakings .....	Pounds 118,488,000	(1)
	Square yards 140,338,000	90,950,000
	Value \$241,988,000	\$55,661,000
All-wool worsted suitings, dress goods, overcoatings and cloakings .....	Pounds 81,288,000	(1)
	Square yards 166,791,000	222,421,000
	Value \$301,850,000	\$141,778,000
Cotton-mixed suitings, dress goods, overcoatings and cloakings .....	Pounds 24,823,000	(1)
	Square yards 28,576,000	31,400,000
	Value \$32,297,000	\$11,711,000
Cotton warp, woolen suitings, dress goods, overcoatings and cloakings .....	Pounds 23,845,000	(1)
	Square yards 39,063,000	53,510,000
	Value \$34,992,000	\$13,598,000
Cotton warp worsted dress goods, overcoatings and cloakings .....	Pounds 23,251,000	(1)
	Square yards 58,154,000	56,763,000
	Value \$45,707,000	\$15,563,000
Flannels for underwear, all wool .....	Pounds 858,000	(1)
	Square yards 1,755,000	2,176,000
	Value \$1,906,000	\$881,000
Flannels for underwear, cotton-mixed .....	Pounds 2,617,000	(1)
	Square yards 6,508,000	4,996,000
	Value \$5,219,000	\$1,090,000
Domet flannels and shirtings .....	Pounds 10,607,000	(1)
	Square yards 19,942,000	16,092,000
	Value \$11,162,000	\$2,814,000
Linings, Italian cloths, and lastings .....	Pounds 6,491,000	(1)
	Square yards 26,064,000	36,196,000
	Value \$13,387,000	\$9,805,000
Satinets and linseys .....	Pounds 5,922,000	(1)
	Square yards 4,770,000	8,415,000
	Value \$3,671,000	\$1,536,000
Blankets, all wool .....	Pounds 5,196,000	(1)
	Square yards 6,344,000	6,490,000
	Value \$7,196,000	\$4,187,000
Blankets, cotton-mixed .....	Pounds 7,412,000	(1)
	Square yards 10,465,000	3,937,000
	Value \$8,711,000	\$2,068,000
Blankets, cotton warp .....	Pounds 7,656,000	(1)
	Square yards 9,291,000	17,974,000
	Value \$7,391,000	\$3,010,000
Horse blankets .....	Pounds 1,664,000	(1)
	Square yards 1,696,000	8,164,000
	Value \$1,606,000	\$2,018,000
Carriage cloths .....	Pounds 587,000	(1)
	Square yards 687,000	514,000
	Value \$1,371,000	\$443,000

Carriage robes .....	Pounds	2,470,000	(1)
	Square yards	2,197,000	1,768,000
	Value	\$3,845,000	\$1,231,000
Woven shawls .....	Pounds	591,000	(1)
	Square yards	869,000	125,000
	Value	\$854,000	\$66,000
Upholstery goods .....	Pounds	2,816,000	(1)
	Square yards	5,149,000	1,508,000
	Value	\$5,105,000	\$1,809,000
All other woven goods .....	Pounds	329,000	(1)
	Square yards	831,000	3,570,000
	Value	\$2,485,000	\$1,219,000
Woolen yarn, all wool .....	Pounds	28,387,000	26,126,000
	Value	\$32,828,000	\$8,783,000
Worsted yarn, all wool .....	Pounds	75,851,000	86,412,000
	Value	\$182,765,000	\$69,801,000
Woolen yarn, union or merino .....	Pounds	9,150,000	6,474,000
	Value	\$6,809,000	\$1,690,000
Worsted yarn, union or merino .....	Pounds	4,428,000	4,049,000
	Value	\$10,129,000	\$3,173,000
Mohair and similar yarns .....	Pounds	1,350,000	9,500,000
	Value	\$2,834,000	
Cotton yarn .....	Pounds	869,000	\$2,425,000
	Value	\$611,000	
Wool card rolls, batts and batting .....	Pounds	137,000	(2)
	Value	\$194,000	(2)
Tops and slubbing .....	Pounds	10,199,000	8,985,000
	Value	\$14,751,000	\$4,927,000
Noils and wool waste .....	Pounds	52,314,000	50,395,000
	Value	\$24,799,000	\$10,140,000
Recovered wool fiber including carbonized rags			
	Pounds	1,540,000	(2)
	Value	\$1,034,000	(2)
All other partially manufactured products.	Pounds	4,690,000	(2)
	Value	\$4,111,000	(2)
All other products .....	Value	\$23,133,000	\$4,620,000
Contract work .....	Value	\$18,299,000	\$3,437,000

(1) Not reported in 1914.

(2) Included in "all other" in 1914.

## WOOL GROWING IN BOLIVIA.

CONCERNING the wool growing in Bolivia, Trade Commissioner W. L. Schurz, writing in a recent number of the *Commerce Reports*, says:

### WOOL INDUSTRY IN BOLIVIA.

In spite of the adaptability of much of Bolivia to the raising of wool-bearing animals, the development of the foreign wool trade of the country is of quite recent date, and much remains to be done before the sheep-raising industry is put on such a modern basis as it has reached in Argentina and Uruguay. During the past decade there has been a very marked increase in the exports of wool.



Whereas in 1911 only about 17,000 kilos of sheep's wool were exported, in 1918 exports had increased to 725,557 kilos of sheep's wool, 191, 806 kilos of alpaca wool, and 146,574 kilos of llama wool.

Sheep are found throughout the highland region of Bolivia, but little serious attention is given to their breeding. The stock consists of the old degenerated merino breed brought in by the Spaniards and allowed to increase and deteriorate with what little care the Indian shepherds give to their flocks. These vary in size from a few sheep to 8,000, flocks of the latter size, however, being very rare even in the Department of La Paz, which is the center of the sheep-raising industry of Bolivia. There is ample pasturage and water over large areas of the upland departments to support many times the number of sheep now grazing there. The wool taken from these sheep is short, the clip from each animal averaging little over 2 pounds of washed wool. Shearing takes place about once every two or three years. A sharpened piece of glass or tin is used for the operation, and the natives refuse to adopt the use of shears. In fact, a lot of a hundred shears which were brought into the country a few years ago found no sale, even though the importer made a personal demonstration of their use.

#### *Llamas and Alpacas Exist in Great Numbers.*

Probably half a million llamas inhabit Bolivia where they constitute the pack animal of the Indian population. They are sheared at intervals of from two to five years, though often this operation does not take place until after their death. When sheared every two years each llama gives about 5 pounds of wool, which is somewhat coarse and always very dirty. Llama wool brings about the same price in Bolivia as unwashed sheep's wool.

There are some 200,000 alpacas in Bolivia, although no effort has ever been made by the Government to take a census of either the alpacas or llamas in the Republic. The animal belongs to the same family as the llama and the vicuna, but its legs are shorter than those of the llama. The alpaca only lives in certain districts, the most favorable to its growth being the region about Lake Titicaca and the Province of Carangas in the Department of Oruro. The centers of the alpaca-wool trade are Charana and Puerto Acosta. The former town lies on the line of the Arico-La Paz railway at the point where it crosses the border into Chile, and serves as the outlet for the alpaca wool supply of the Carangas country; Puerto Acosta is situated on Lake Titicaca. The Bolivian Government has been desirous of stimulating the raising of alpacas, and a few years ago gave a concession for that purpose, but nothing has yet been done to comply with its terms beyond the maintenance of a single alpaca on the property near Lake Titicaca, which was originally granted the company. Most of the herds of alpacas belong to Indians who give them little attention, but who at least understand the peculiarities of the animal, and are able to domesticate it. A more careful study of alpaca raising has been made in the Arequipa district of Peru than has been made in Bolivia.

It is customary to shear the herds every two years, though many



are sheared at intervals of five years, about 10 pounds of wool being generally obtained from a single alpaca. In addition to the use of alpaca skins as material for clothing, they serve as rugs which sell for from 100 to 200 bolivianos (1 boliviano=\$0.389), the price depending upon size and color. The alpaca is sometimes crossed with the llama, the wool of the hybrid animal being sold as alpaca wool.

### *Bolivian Wool Export Trade.*

Exports of wool from Bolivia for the period 1911 to 1919 were as follows (1 kilo=2.2 pounds; 1 boliviano=\$0.3893, normal exchange):

Exports for countries for 1918 were as follows:

Year.	Sheep.		Alpaca.		Llama.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Kilos.</i>	<i>Bolivianos.</i>	<i>Kilos.</i>	<i>Bolivianos.</i>	<i>Kilos.</i>	<i>Bolivianos.</i>
1911 . . . . .	16,956	12,264	17	17	4,199	3,359
1912 . . . . .	17,047	14,490	17	17	4,199	3,359
1913 . . . . .	21,350	18,679	4,670	14,010	4,199	3,359
1914 . . . . .	31,798	25,438	24,912	74,736	4,199	3,359
1915 . . . . .	56,873	51,561	77,431	162,605	14,973	11,978
1916 . . . . .	101,410	91,269	99,497	208,943	44,446	35,556
1917 . . . . .	157,926	142,133	127,264	267,254	67,194	53,755
1918 . . . . .	725,557	1,139,102	191,806	341,975	146,574	198,513
1919 <sup>a</sup> . . . . .	234,202	434,134	43,528	205,564	29,240	104,332

<sup>a</sup> The figures for 1919 cover only the first six months of the year.

Exports by countries for 1918 were as follows:

Destination.	Quantity.	Value.	Percentage.
Sheep's wool:	<i>Kilos.</i>	<i>Bolivianos.</i>	
United States . . . . .	382,433	726,651	63.80
Great Britain . . . . .	261,889	352,301	30.91
Chile . . . . .	30,542	9,177	.81
France . . . . .	28,543	28,543	2.51
Argentina . . . . .	22,040	22,263	1.96
Peru . . . . .	130	165	.01
Alpaca wool:			
Great Britain . . . . .	102,788	242,492	72.66
Chile . . . . .	79,686	69,315	20.27
United States . . . . .	9,238	24,927	7.00
Peru . . . . .	94	240	.07
Llama wool:			
Chile . . . . .	53,418	40,965	20.63
Great Britain . . . . .	51,710	81,341	40.97
United States . . . . .	41,446	76,207	38.40

The export duty on sheep and llama wool amounts to 20 centavos per kilo, and for alpaca wool the duty is 30 centavos per kilo.

*Domestic Wool Manufactures.*

It is probable that almost 1,000,000 pounds of wool are used annually in Bolivia for the manufacture of the woolen stuffs worn by the natives. There are no manufacturing plants engaged in the making of woollens on an industrial basis, as in Peru, although a local company was recently formed for that purpose. However, nearly all the Indian women of the country districts engage in weaving woolen shawls, ponchos, and other articles of wear. The equipment used in weaving is of the most primitive sort.

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### THE CANADIAN WOOL INDUSTRY.

A CANADIAN writing on "Sheep Husbandry in Canada" makes these observations on The Canadian Wool Industry.

Sheep raising in Canada is carried on more for the production of mutton than of wool. That is to say the first object of the Canadian sheep raiser is to produce mutton, and secondly to get what he can without special care for his annual crop of wool. In this respect the sheep raising conditions in Canada do not differ materially from those in other parts of the world where advanced agriculture is carried on. Simple wool growing cannot be maintained in any country where land has any considerable value. As civilization has advanced and the processes of agriculture have improved, one country after another has ceased to grow wool for itself alone; mutton has become the principal and wool the incident of the business.

The total Canadian annual export has not for a number of years reached two million pounds—about one-fifth of the total shorn crop—and the great proportion of this has gone to the United States.

#### THE ANNUAL CROP.

The annual wool clip of Canada in recent years has been in round numbers twelve million pounds, divided by provinces about as follows:

British Columbia	95,000
Alberta	631,000
Saskatchewan	496,000
Manitoba	135,500
Ontario	5,519,500
Quebec	2,670,000
New Brunswick	986,000
Nova Scotia	1,189,500
Prince Edward Island	385,500
Total	12,108,000

These figures represent the total weights at the farms, including both washed and unwashed wool. In the province of Ontario from 70 to 80 per cent of the wool is washed. West of a line drawn north from Kingston the usual practice is to wash the wool on the sheep,

whereas east of that line, also in Quebec and the maritime provinces, tub washing is the rule. In the western provinces wool washing is little practised by the sheep raisers, and then only in British Columbia. Sheep washing was tried in Manitoba, but the scarcity of running streams and the natural hardness of the water rendered the operation difficult and unsatisfactory, and it has been discontinued. Practically all the range wool is marketed in the grease, which accounts for its heavy shrinkage owing to unavoidable accumulations of dust and dirt gathered during the dry, warm weather frequently more or less windy.

Apart from the range wool, which contains more or less Merino character, Canadian wool ranges from medium clothing to coarse combing, varying in proportion to the prevailing breeds. The finest grades, outside of the provinces of Saskatchewan and Alberta, are found in the maritime provinces, the Eastern Townships of Quebec, the Ottawa valley, and in British Columbia. Even the common or unimproved flocks of these districts produce a relatively fine grade of wool, while the improved flocks possess more of Down than of long-wool character. In addition to this the soil and the climate of the sections referred to, more especially the maritime provinces, appear to exert a favorable influence on the wool as regards softness of texture and working quality. In these sections fully 60 per cent of the clip is classed as clothing wool and 40 per cent as combing, whereas in the crop shorn in central and western Ontario, Manitoba, and parts of Quebec, the proportion of long combing wool reaches quite 75 per cent.

The great bulk of the wool grown on the ranches of Saskatchewan and Alberta occupies a class of its own among Canadian wools. The yearly clip approaching 1,000,000 pounds in the grease, representing from 400,000 to 500,000 pounds of scoured wool, is classed as fine medium. That is to say it is finer than the finest grown in other provinces and coarser than the fine wools clipped from Merino sheep in South Africa, South America, and Australia, of which large quantities are imported into Canada each year. It is the regret of the woolen manufacturer that this wool is each year growing coarser, the result of additional mutton crosses upon the Merino stock originally brought from Montana.

#### THE EXPORT TRADE.

The United States has always been the chief outside market for Canadian wool. Great Britain takes a small quantity each year, and a few small shipments are occasionally made to Newfoundland. The annual exports to the United States for the past thirty years have usually been above the million pounds mark; less than half a dozen times it has fallen below the million, and twice that number of yearly periods it has exceeded the two million mark. In 1855, 3,550,000 pounds crossed the United States boundary, while during the three years beginning in 1895 the export ran up to 5,449,955, 3,851,432, and 7,499,949 pounds, respectively. The great increase during these years was due to the withdrawal of the customs duty on wool entering the United States as a condition of the Wilson-Gorman

tariff. The year later (1898), when the tariff had been restored, the amount fell to about 1,000,000 pounds, and in 1899 to some 22,000 pounds. Since then it has been fairly constant, running from a little under 1,000,000 to about 2,250,000 pounds.

Practically only one class of wool goes from Canada to the United States—combing wool of a length of five inches and upwards, washed on the sheep's back. The Leicester wools are in very limited demand in Canada and go chiefly to the United States; the others are practically all used up in Canadian mills.

The exports to Great Britain have only once exceeded half a million pounds in one year (1879), when 640,000 pounds were shipped. Prior to 1887, fairly large shipments were made each year, but from that year until 1895 little or no Canadian wool found its way to Great Britain. Since that time the exports have increased, the quantity for 1906 being 200,039 pounds, and for 1910, 517,154 pounds. Except for a few lots of range wool the exports to Great Britain have consisted of washed clothing wool.

#### DOMESTIC CONSUMPTION.

The comparatively small export of wool leaves about 10,000,000 pounds of shorn crop for domestic use. It is impossible to properly estimate the quantity that is still worked up at the farm. In New Brunswick, Quebec, and to some slight extent in the other provinces, home carding and spinning are still in vogue, and no doubt considerable wool is used in the homes for making mattresses, quilts, etc. The quantities used in these ways are year by year decreasing, thus augmenting the supply to be taken care of in the mills. In addition to 8,000,000 to 9,000,000 pounds of home grown wool consumed in the Canadian mills large quantities of imported wools are brought in each year. For the year ended March 31, 1908, 1909, and 1910, the quantities imported were respectively as follows: 6,129,216, 5,683,948, and 7,427,079 pounds. These wools, with slight exception, are said to consist of fine Merino qualities such as are not grown in Canada, and are required in the manufacture of fine goods, such as flannels, fine tweeds, meltons, beavers, whipcords, covert cloths, and fine rugs. These wools also enter very largely into the manufacture of underwear and other fine knitted goods.

The mills using Canadian wools manufacture such staple lines as blankets, mackinaws, friezes, etoffs, tweeds, homespuns, sweaters, yarns, etc., each of which fills a large place in the requirements of the ever increasing population. Many of the smaller mills depending upon the local wool supply use Canadian wools almost exclusively. These manufacture several lines of goods, and in this way consume the different grades of wool produced. With few exceptions, what may be termed the large mills, import most of their wool and mix with it a little Canadian and a certain proportion of shoddy and of cotton.

That there will always be a strong demand for the substantial goods made from the finer grades of Canadian wool admits of no argument. Their wearing qualities appeal to the rural dweller and the more frugal of the urban population. Just now the fashions in

both men's and women's clothing call for a fine fabric presenting a smooth surface. It is safe to predict that the fashions in men's clothes, more especially business suits, will revert toward the tweeds such as are readily made in Canadian mills from Canadian wools, replacing the smooth imported worsteds now so generally worn.

#### DEFECTS OF CANADIAN WOOL—LACK OF UNIFORMITY.

Canadian wool, as compared with that grown in countries devoted largely to sheep raising, and where the climate is never severe, presents defects that are complained of by every wool dealer and manufacturer. The very general lack of uniformity of breed naturally gives a mixture to the character of the wool. This presents a difficulty to the manufacturer of special lines who desires to purchase a large quantity of one class. He is now compelled to purchase more or less mixed lots and pay men at his mill to re-sort them. This defect will continue until extensive Canadian wool markets are developed to better classify and take care of the output.

#### RANGE WOOLS.

A wide difference of opinion prevails among manufacturers and dealers in regard to Canadian range wools. A number hold a rather poor opinion of them, while others find them quite satisfactory for the manufacture of the medium fine tweeds, flannels, fine blankets, and underwear. In summing up the various opinions the writer concludes that these wools differ widely according to the character of the sheep from which they are shorn and the care given to them, especially during the winter and spring, as well as the grading and general care given the wool after it has been shorn. It appears to be perfectly true that much Canadian range wool lacks uniformity in quality according to the breeding of the bands. The original stocks were very largely Merino, but all the grading has been in the direction of mutton. The character of the wool, therefore, differs according to the number and breed of mutton crosses in the shorn sheep. A long wool cross produces a coarser wool than a Down cross, and so on from year to year and from cross to cross.

Again a great deal of complaint is expressed with regard to the strength of fleece as well as the presence of coarse fibers known as "kemp" throughout the fleece. An investigation of this charge brought out the fact that the conditions complained of exist in the product of careless ranchers, while the wool raised on and shipped from well managed range flocks is not only uniform and strong in fiber, but almost or quite free from kemp. . . . The "break" in range wool is believed to be caused by the periods of severe weather and shortage of feed experienced to a greater or less degree each winter or spring. The wool produced on ranges that provide food and shelter from storms and severe cold does not show that tenderness complained of by certain manufacturers.



## ARGENTINE WOOL MEN WRITE OF "SKIRTING."

THE following paragraphs on "skirting" are taken from a report on the wool growing industry made by Consul General Robertson of Buenos Aires and printed in the Commerce Reports for January 2, 1920. It will be observed that the information was secured by the Consul from "a wool expert" and "a prominent wool grower" of Argentina. They will prove of interest to all engaged in the manufacture or handling of wool. The Consul General wrote:

In reply to a written inquiry of this consulate general as to how and where the broken fleeces, pieces, casings, and matchings are made, and as to the character of the process known as "skirting" a wool expert wrote as follows:

The wool taken off the grown sheep is in Australia classed on the farm and divided up as follows:

- (1) Fleece wool—being the body of the fleece with the outer portions trimmed off, owing to their being of a different grade from that of the fleece or because seed affected.
- (2) Belly wool—this explains itself.
- (3) Necks—the wool growing along the windpipe which is somewhat coarser than the rest of the fleece.
- (4a) Broken fleece—large pieces.
- (4b) First pieces—the best trimmings usually from the hind quarters.
- (4c) Second pieces—smaller trimmings of irregular staple more or less "locky," that is, wool clotted with grease.
- (4d) Stained pieces—that is, tag affected.
- (5) Britch—the trimmings from the lowest part of the thighs frequently rather coarse, especially in crossbreds.
- (6) Cutchings—trimmings from between the legs and under the tail taken off prior to lambing and to free the sheep that have been scouring from dung balls.

In this country as far as concerns wool that comes to the market, we have only to do with classes 1, 2, and 6 and with skirts—synonymous with pieces; broken fleeces—large pieces; casings—fleece wool from different clips classed so as to be uniform in grade and appearance (color) and baled together (classing means throwing the fleeces according to grade) casings may consist of skirted or unskirted wools; matchings—wools sorted strictly according to grade (diameter of fiber) and length of staple; but not for appearance (those operations are carried out exclusively in the warehouses) and skirtings.

## DESCRIPTION OF PROCESS CALLED SKIRTING.

In the process of skirting the classed fleece is opened upon the sorting table, weather side uppermost and, in the case of wool for America any portions affected by seed or dung stained are trimmed



off. The britch, if coarse, is also removed. The seed affected portions are usually the lower part of the flank close to the belly, the thighs, and the part near the head. The depth of the skirting depends on the amount of seed and varies from 5 to 30 per cent. Only wools which have little seed are skirted. Sometimes the shoulder pieces which are finer than the body of the fleece are removed and thrown with the higher grade wool. The fleece, or rather what remains of it, is then passed to another table where it is tied together with other fleeces into bundles of uniform size and weight. Some buyers do not retie the fleeces. These skirted wools are practically matchings, as they are classed very closely.

As regards the process known as skirting, this office is informed by a prominent wool grower as follows:

Under the designation "classification for the United States" is included also what is called "skirting" in England, for it is the only country to which wool is sent under such conditions.

#### NO FIXED RULES REGARDING THE PROCESS OF SKIRTING.

After the wool has been classified according to fineness, the fleeces are untied one by one, and are then stretched out on a table, the wool being separated from the edge, that covering the head, the feet, and the belly, as this is coarser and darker than the rest. Then the fleece which remains sufficiently firm for all ordinary purposes is rolled up again and tied up with a string, each fleece remaining thus separated.

As a general rule, care appears to be taken to keep each fleece by itself after skirting; and the whole process of skirting would appear, in most cases, to be left to the judgment of the operator or grower.

A large wool buyer here for a United States house had the following to say regarding skirting:

It is not possible to give an exact account of the process known as skirting, since there are no fixed rules for this process, which is left largely to the judgment of the operator or the grower and especially of the buyer. Some growers and buyers keep each fleece by itself after skirting, while in other cases parts of several different fleeces are combined to make a complete fleece.

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#### JAMES DOBSON RETIRES FROM PRESIDENCY OF COMPANY.

At the June meeting of the stockholders of the John & James Dobson, Inc., of Philadelphia, Mr. James Dobson who, upon the death of his brother John Dobson, succeeded him in June, 1911, as head of the business, retired from the presidency of the company. Mr. Dobson is 84 years of age and his retirement from the presidency of the company marks the end of his activity in connection

with its affairs, although as chairman of the Board of Directors he will keep in touch with the company and give it the benefit of his experience and advice.

John Dobson, the founder of the business, came to this country in 1848, from England. A short time thereafter he started in the woolen manufacture on his own account, becoming associated with James Lees in West Manayunk. After several changes the mill was located at the Falls of the Schuylkill, and at the outbreak of the Civil War the manufacture of blankets was undertaken. Upon the invasion of Pennsylvania by the Confederate Army John Dobson organized a company from his mill for the Union Army, and while absent in that service the management of the business was undertaken by his brother, James Dobson, who had become connected with the enterprise. After the war was ended the brothers formed a partnership under the firm name of John & James Dobson. At that time the manufacture of carpets was begun. Later plushes and velvets were added and still later the making of worsted yarns was started. The business has continually expanded until today the company is operating five plants in Philadelphia and making blankets, carpets, rugs, plushes, velvets, cloakings, men's wear, and dress goods, and operating 47 worsted cards, 40 combs, 31,216 spindles, 39 woolen cards, and 1335 looms. It is capitalized at \$9,200,000.

Thomas J. Jeffries, vice-president of the company since its incorporation in 1913, and son-in-law of Mr. Dobson, was advanced to the presidency, and William P. Gest, president of the Fidelity Trust Company of Philadelphia, and Samuel D. Riddle were elected vice-presidents, H. S. Zuber, treasurer, and R. W. Hillegas, secretary.

### NEW ZEALAND'S WOOLEN MILLS.

A RECENT report by the British Board of Trade of the operations of New Zealand's woolen mills shows among other things, the expansion of the companies from 1905-1906 to 1918-1919. The figures in the annexed table indicate that the industry in New Zealand will have to take many years, if the same rate of expansion is maintained in the future as was shown in the past dozen years, to consume any considerable proportion of the country's annual wool production. There does not appear to be any immediate likelihood of the wool clip appearing in the home markets "only in the form of bolts of cloth," either for domestic consumption or for export.

The figures as given are:

	1905-6	1918-19
Employees .....	1,549	1,878
Annual wages bill .....	£105,036	£233,170
Horse power .....	1,945	3,452
Value of buildings .....	£110,297	£210,980
Value of machinery and plant .. .	£188,459	£245,956
Scoured wool used (lb.) .....	3,835,064	4,363,956
Output of tweed (yds.) .....	1,300,471	1,675,113
Output of flannel (yds.) .....	1,368,268	853,247
Output of blankets (prs.) .....	59,572	88,383
Output of rugs and shawls (number)	23,780	25,171
Output of yarn (lb.) .....	259,067	271,425
Total value .....	£397,713	£956,434

## Statistics for Second Quarter, 1921.

### ACTIVE AND IDLE MACHINERY, AS OF APRIL, MAY, AND JUNE, 1921.

AS REPORTED BY THE BUREAU OF THE CENSUS,  
UNITED STATES DEPARTMENT OF COMMERCE.

THE reports issued by the Bureau of the Census of the idle and active machinery in the wool manufacture for the second quarter of the year 1921, covering the months of April, May, and June, are herewith presented. These reports were begun by the National Association of Wool Manufacturers in December, 1913, and since that date they form a continuous record of the state of the industry. In November, 1918, the Bureau of Markets asked to take over the work and later it was turned over to the Census.

Since January 1, 1921, when the bottom seems to have been touched, there has been a steady improvement in the industry; the change for the better being noticeable in the report for each of the three months. The report for April 1 showed increased activity over the previous month in the broad looms of 7 per cent; the report for May 2, an increase of 9.9 per cent, and the report for June 1, an increase of 5.7 per cent; bringing the percentage of idle machinery down from 43.1 per cent on March 1 to 20.5 per cent on June 1.

In the narrow looms the increase in activity on April 1, over that of March 1, was 7.3 per cent. The increase for the next month was 5.7 per cent, and on June 1, the increase was 3.3 per cent.

The carpet industry is still suffering from too much idle machinery, though even there an improvement is seen of 2.5 per cent between March 1 and June 1, the April idleness figures standing at 60.5 per cent.

Increased activity of the cards was also marked between March 1 and June 1, the idle machinery percentage falling from 46.2 per cent on the former to 21.6 per cent on the latter date.

The worsted branch, though not showing greater proportionate improvement than the woolen branch, has the smaller percentage of idle machinery, the percentage for combs falling from 28.3 per cent on March 1 to 10.9 per cent on June 1, while the percentage of idle worsted spinning spindles dropped from 33 per cent on the former to 10.1 per cent on the latter date. Meanwhile the percentage of idle woolen spindles fell from 47.2 per cent to 20.6 per cent.

The quarter showed gratifying improvement and if the gains made can be held, it will not be many months before demand for wool will be steady and strong, which should make a considerable inroad on the stocks on hand.

#### April 1, 1921.

##### *Summary of Reports of 921 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	39,749	11,821	3,663	4,476	1,982	1,548,779	1,846,849
Idle . . . . .	22,425	6,211	4,899	2,294	457	738,600	514,245
Total . . . .	62,174	18,032	8,562	6,770	2,439	2,287,379	2,361,094

#### May 2, 1921.

##### *Summary of Reports of 919 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	45,861	12,794	3,963	4,948	2,095	1,739,603	2,052,389
Idle . . . . .	16,263	5,138	4,572	1,673	347	544,050	303,163
Total . . . .	62,124	17,932	8,535	6,621	2,442	2,283,653	2,355,552

June 1, 1921.

*Summary of Reports of 917 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	49,415	13,600	4,027	5,229	2,200	1,823,774	2,128,829
Idle . . . . .	12,779	4,589	4,541	1,444	270	471,847	238,243
Total . . . .	62,194	18,189	8,568	6,673	2,470	2,295,621	2,367,072

## Percentage of Idle Machinery to Total Reported.

June 1, 1921 . .	20.5	25.2	58.0	21.6	10.9	20.6	10.1
May 2, 1921 . .	26.2	28.7	53.6	25.3	14.2	23.8	12.9
April 1, 1921 . .	36.1	34.4	56.2	33.0	18.7	32.3	21.8
March 1, 1921 . .	43.1	41.7	60.5	46.2	28.3	47.2	33.0
Feb. 1, 1921 . .	53.9	48.7	49.7	56.5	43.8	58.9	43.0
Jan. 1, 1921 . .	57.0	49.2	45.7	58.1	52.9	59.4	50.8
Dec. 1, 1920 . .	51.2	44.8	40.1	50.3	41.4	51.7	42.7

## Number of Machines in Operation Per Shift Beginning January 1, 1921.

June 1, 1921:							
Single shift,	47,532	12,512	3,978	4,810	1,627	1,686,123	2,000,149
Double shift,	1,883	88	49	419	573	137,651	128,680
May 2, 1921:							
Single shift,	44,276	12,794	3,916	4,588	1,617	1,613,780	1,932,413
Double shift,	1,585		47	360	478	125,823	119,976
April 1, 1921:							
Single shift,	38,363	11,821	3,622	4,253	1,615	1,465,120	1,758,265
Double shift,	1,396		41	223	367	83,659	88,584
March 1, 1921:							
Single shift,	33,595	10,440	3,367	3,427	1,486	1,162,494	1,521,368
Double shift,	1,799		39	148	257	54,469	63,388
Feb. 1, 1921:							
Single shift,	27,510	9,309	4,272	2,785	1,129	922,766	1,281,316
Double shift,	1,377		40	85	216	22,173	46,544
Jan. 1, 1921:							
Single shift,	26,124	9,191	4,655	2,639	981	884,949	1,100,620
Double shift,	446		59	144	153	42,427	51,770
Dec. 1, 1920:							
Single shift,	29,528	9,957	5,063	3,139	1,190	1,050,640	1,297,701
Double shift,	649		58	176	218	52,963	35,500



## Active and Idle Machine and Spindle Hours.

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
June 1, 1921:							
Active . . . .	10,296,047	2,662,740	784,966	1,132,253	544,136	394,300,649	439,182,833
Idle . . . .	2,564,921	1,147,682	995,728	279,314	7,767	90,021,527	50,813,864
May 2, 1921:							
Active . . . .	9,589,287	2,407,624	685,530	1,056,351	511,485	373,822,549	422,725,464
Idle . . . .	3,466,314	1,401,231	1,117,134	351,540	29,059	111,053,354	65,839,925
April 1, 1921:							
Active . . . .	8,339,925	2,070,627	668,413	952,427	474,832	334,183,014	384,756,157
Idle . . . .	5,169,386	1,859,737	1,205,236	531,869	60,539	172,833,614	133,084,420
March 1, 1921:							
Active . . . .	6,605,552	1,536,665	618,029	660,852	350,173	228,390,721	285,671,955
Idle . . . .	5,475,549	2,043,101	1,092,370	676,151	124,130	233,455,365	174,054,918
Feb. 1, 1921:							
Active . . . .	5,120,762	1,309,307	644,828	492,853	240,400	167,838,013	215,102,563
Idle . . . .	7,692,284	2,620,214	1,119,997	886,376	250,428	304,638,487	265,976,086
Jan. 1, 1921:							
Active . . . .	4,543,949	1,145,890	787,770	488,789	193,221	157,503,237	176,887,155
Idle . . . .	9,089,433	2,835,281	1,059,615	953,372	327,860	341,621,140	330,813,646
Dec. 1, 1920:							
Active . . . .	5,194,419	1,490,748	942,368	597,452	239,272	198,552,216	218,409,778
Idle . . . .	7,701,531	2,272,927	808,414	794,179	249,093	232,560,878	250,654,315

## Percentage of Idle Hours to Total Reported.

June 1, 1921 . .	19.9	30.1	55.9	19.8	1.4	18.6	10.4
May 2, 1921 . .	26.6	36.8	62.0	25.0	5.4	22.9	15.5
April 1, 1921 . .	38.3	47.3	64.3	35.8	11.3	34.1	25.7
March 1, 1921 . .	45.3	57.1	63.9	50.6	26.2	50.5	37.9
Feb. 1, 1921 . .	60.0	66.7	63.5	64.3	51.0	64.5	55.3
Jan. 1, 1921 . .	66.7	71.2	57.4	66.1	62.9	68.4	65.2
Dec. 1, 1920 .	59.7	60.4	46.2	57.1	51.0	53.9	53.4

## WOOL STOCKS AND CONSUMPTION.

BELOW is the report of the United States Department of Agriculture showing the quantity of wool on hand in the United States as of December 31, 1920, and March 31, 1921. This statement is issued quarterly by the Department, and corresponding statements for previous quarters were published in earlier numbers of the BULLETIN. These figures taken in connection with the Government monthly reports of wool consumed and of the Active and Idle Machinery Reports give a very clear idea of the condition of the industry from time to time.

WOOL STOCKS, DECEMBER 31, 1920, AS REPORTED BY DEALERS, MANUFACTURERS, AND THE UNITED STATES GOVERNMENT.

As Reported by Dealers and Manufacturers.	Held by		Total.	Estimated Equivalent Grease Wool.	Held by Government.	
	Dealers.	Manu- facturers.				Estimated Equivalent Grease Wool.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Grease Wool:						
Domestic . . . . .	142,101,000	47,264,000	189,365,000		969,000	
Foreign . . . . .	46,721,000	72,502,000	119,223,000		36,638,000	
Total . . . . .	188,822,000	119,766,000	308,588,000	308,588,000	37,607,000	37,607,000
Scoured Wool:						
Domestic . . . . .	13,943,000	7,995,000	21,938,000		705,000	
Foreign . . . . .	13,871,000	9,296,000	23,167,000		8,739,000	
Total . . . . .	27,814,000	17,291,000	45,105,000	90,210,000	9,444,000	18,888,000
Pulled Wool:						
Domestic . . . . .	8,982,000	4,091,000	13,073,000		198,000	
Foreign . . . . .	5,370,000	2,804,000	8,174,000		3,756,000	
Total . . . . .	14,352,000	6,895,000	21,247,000	28,196,000	3,954,000	7,908,000
Total grease, scoured, and pulled . . . . .						
Tops . . . . .	6,616,000	18,851,000	25,467,000	50,934,000		
Nolls . . . . .	5,434,000	9,991,000	15,425,000	30,850,000		
Grease equivalent of all wool reported above,				508,778,000		64,403,000
Estimated grease equiv- alent of all wool re- ported held by deal- ers, manufacturers, and the U. S. Govern- ment Dec. 31, 1920 . . . . .						570,181,000

WOOL STOCKS, MARCH 31, 1921, AS REPORTED BY DEALERS, MANUFACTURERS,  
AND THE UNITED STATES GOVERNMENT.

As Reported by Dealers and Manufacturers.	Held by		Total.	Estimated Equivalent Grease Wool.	Held by Government.	
	Dealers.	Manu- facturers.				Estimated Equivalent Grease Wool.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Grease Wool:						
Domestic . . . . .	46,259,000	47,866,000	94,125,000		2,443,000	
Foreign . . . . .	76,989,000	87,779,000	164,768,000		48,423,000	
Total . . . . .	123,248,000	135,645,000	258,893,000	258,893,000	50,866,000	50,866,000
Scoured Wool:						
Domestic . . . . .	8,730,000	11,452,000	20,182,000		1,867,000	
Foreign . . . . .	17,548,000	16,648,000	34,196,000		10,701,000	
Total . . . . .	26,278,000	28,100,000	54,378,000	108,756,000	12,568,000	25,136,000
Pulled Wool:						
Domestic . . . . .	10,404,000	6,715,000	17,119,000		507,000	
Foreign . . . . .	7,306,000	2,624,000	9,930,000		5,036,000	
Total . . . . .	17,710,000	9,339,000	27,049,000	36,065,000	5,543,000	7,390,000
Total grease, scoured, and pulled . . . . .						
Tops . . . . .	7,623,000	19,325,000	26,948,000	53,896,000		
Noils . . . . .	3,690,000	9,316,000	13,006,000	26,012,000		
Grease equivalent of all wool reported above, . . . . .				483,622,000		83,392,000
Estimated grease equiv- alent of all wool re- ported held by deal- ers, manufacturers, and the U. S. Govern- ment March 31, 1921, . . . . .						567,014,000

WOOL CONSUMED BY MONTHS.

DECEMBER, 1920.\*

			In Grease.
In grease . . . . .	16,710,000 pounds	=	16,710,000 pounds.
Scoured . . . . .	3,185,000 "	=	6,370,000 "
Pulled . . . . .	909,000 "	=	1,212,000 "
Total . . . . .	20,804,000 "	=	24,292,000 "

## JANUARY, 1921.\*

		In Grease.	
In grease.....	22,068,000 pounds	=	22,068,000 pounds.
Scoured.....	3,145,000 "	=	6,290,000 "
Pulled.....	1,087,000 "	=	1,449,000 "
<hr/>		<hr/>	
Total.....	26,300,000 "	=	29,807,000 "

## FEBRUARY, 1921.\*

		In Grease.	
In grease.....	25,750,000 pounds	=	25,750,000 pounds.
Scoured.....	4,283,000 "	=	8,566,000 "
Pulled.....	1,416,000 "	=	1,888,000 "
<hr/>		<hr/>	
Total.....	31,449,000 "	=	36,204,000 "

## MARCH, 1921.\*

		In Grease.	
In grease.....	32,818,000 pounds	=	32,818,000 pounds.
Scoured.....	5,525,000 "	=	11,050,000 "
Pulled.....	2,485,000 "	=	3,313,000 "
<hr/>		<hr/>	
Total.....	40,828,000 "	=	47,181,000 "

## APRIL, 1921.\*

		In Grease.	
In grease.....	37,636,000 pounds	=	37,636,000 pounds.
Scoured.....	5,919,000 "	=	11,838,000 "
Pulled.....	2,698,000 "	=	3,597,000 "
<hr/>		<hr/>	
Total.....	46,253,000 "	=	53,071,000 "

## MAY, 1921.\*

		In Grease.	
In grease.....	41,657,000 pounds	=	41,657,000 pounds.
Scoured.....	6,110,000 "	=	12,220,000 "
Pulled.....	2,289,000 "	=	3,052,000 "
<hr/>		<hr/>	
Total.....	50,056,000 "	=	56,929,000 "

\* No statement was made of the number of manufacturers to whom reports were sent or the number reporting.

QUARTERLY REPORT OF THE BOSTON WOOL MARKET FOR  
APRIL, MAY, JUNE, 1921, AND JUNE, 1920.

DOMESTIC WOOLS. (F. NATHANIEL PERKINS.)

	1921.			1920.
	April.	May.	June.	June.
OHIO, PENNSYLVANIA, AND WEST VIRGINIA.				
(UNWASHED.)	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Fine Clothing . . . . .	28	28	28	60
$\frac{1}{2}$ Blood, Staple . . . . .	32	31	30	65
" " . . . . .	27	26	25	54
" " . . . . .	25	24	24	47
Fine Delaine . . . . .	37	36	35	70
MICHIGAN, WISCONSIN, NEW YORK, ETC.				
(UNWASHED.)				
Fine Clothing . . . . .	25	25	24	60
$\frac{1}{2}$ Blood, Staple . . . . .	29	28	27	65
" " . . . . .	25	24	24	55
" " . . . . .	24	23	23	47
Fine Delaine . . . . .	33	32	30	...
KENTUCKY AND INDIANA.				
(UNWASHED.)				
$\frac{1}{2}$ Blood . . . . .	30	29	28	60
" " . . . . .	27	28	27	55
Braid . . . . .	18	18	18	25
MISSOURI, IOWA, AND ILLINOIS.				
(UNWASHED.)				
$\frac{1}{2}$ Blood . . . . .	25	24	23	55
" " . . . . .	24	23	22	50
Braid . . . . .	15	14	14	25
TEXAS.				
(SCOURD BASIS.)				
12 months, fine and fine medium . . . . .	70	70	75	165
Spring, fine and fine medium . . . . .	55	55	55	140
Fall, fine and fine medium . . . . .	48	50	52	130
CALIFORNIA.				
(SCOURD BASIS.)				
12 months, fine . . . . .	65	65	65	165
Spring, fine . . . . .	53	53	55	150
Fall, fine . . . . .	42	42	45	130
TERRITORY WOOL: Montana, Wyoming, Utah, Idaho, Oregon, etc.				
(SCOURD BASIS.)				
Staple, fine and fine medium . . . . .	90	85	80	175
Clothing, fine and fine medium . . . . .	65	65	65	150
$\frac{1}{2}$ Blood . . . . .	70	68	68	150
" " . . . . .	55	53	52	95
" " . . . . .	40	39	38	80
NEW MEXICO.				
(SCOURD BASIS.)				
No. 1 . . . . .	65	65	65	150
No. 2 . . . . .	50	50	50	130
No. 3 . . . . .	25	30	32	50
GEORGIA AND SOUTHERN.				
Unwashed . . . . .	22	21	20	40

## DOMESTIC WOOLS.

The second quarter of the year opened with a somewhat lessened demand. Advices from the foreign markets showed a steadily declining tendency. The wool machinery of the country showed a substantial improvement in activity. Business in the West was less active than in former years as the clip commenced to move, because the views of the growers were so strong that Eastern dealers could not meet them.

There was a better general demand for  $\frac{3}{8}$ s and  $\frac{1}{4}$  fleece wools during this period. Shearing in Arizona started and these wools came to the Seaboard markets largely on consignment at very conservative advances.

Interest centered in the Emergency Tariff bill, but its final passage had little or no effect on wool market prices. It had been largely discounted and manufacturers followed a policy of moderate buying. With a healthy situation continuing among the mills enough trade ensued from week to week to give a stability to values, especially on the better classes of wool, although the treasurers showed no apparent desire to stock up with wool ahead of their immediate requirements.

The 110th Government Wool Auction Sale, the latter part of June, was only fairly attended. Prices were moderately maintained. Only about 72 per cent of the offerings were sold, principally to the carpet trade.

The quarter closed with a generally steady market with more activity among the growers in the Western markets at somewhat firmer prices than at the start, but at the Seaboard markets trading was "spotty."

F. NATHANIEL PERKINS.

Boston, July 1, 1921.



FOREIGN WOOLS. (MAUGER & AVERY.)

Scoured Basis, 1921.

	1921.			1920.
	April.	May.	June.	June.
Australian Combing:	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Choice . . . . .	108	105	100	180
Good . . . . .	85	85	85	170
Average . . . . .	75	75	75	160
Australian Clothing:				
Choice . . . . .	108	105	100	175
Good . . . . .	80	80	80	160
Average . . . . .	70	70	70	150
Sydney and Queensland:				
Good Clothing . . . . .	80	80	80	160
Good Combing . . . . .	85	85	85	170
Australian Crossbred:				
Choice . . . . .	35 @ 65	35 @ 65	35 @ 65	55 @ 115
Average . . . . .	30 @ 55	30 @ 55	30 @ 55	50 @ 100
Australian Lambs:				
Choice . . . . .	85	85	85	160
Good . . . . .	75	75	75	140
Good Defective . . . . .	55	55	55	110
Cape of Good Hope:				
Choice . . . . .	100	100	100	165
Average . . . . .	70	70	70	130
Montevideo:				
Choice . . . . .	70	70	70	165
Average . . . . .	60	60	60	150
Crossbred, Choice . . . . .				110
English Wools:				
Sussex Fleece . . . . .	70	65	60	130
Shropshire Hogs . . . . .	48	46	45	115
Yorkshire Hogs . . . . .	30	30	30	63
Irish Selected Fleece . . . . .	28	28	28	65
Carpet Wools:				
Scotch Highland, White . . . . .	21	19	17½	
East India, 1st White Joria . . . . .	30 @ 32	30 @ 32	33 @ 34	58
East India, White Kandahar . . . . .	27 @ 29	27 @ 29	28 @ 30	45
Donskol, Washed, White . . . . .				
Aleppo, White . . . . .	30	28 @ 30	28 @ 30	40
China Ball, White . . . . .	35	35	35	70 @ 80
" " No. 1, Open . . . . .	25 @ 26	25 @ 26	25 @ 26	35 @ 38
" " No. 2, Open . . . . .	17 @ 18	17 @ 18	17 @ 18	33 @ 35

FOREIGN WOOLS.

The principal feature in the market for foreign wools during the quarter under review was the effort of the importers to bring in tops and fine wools, principally before the passage of the Emergency Tariff bill. Statistics show the large quantities imported since the passage of the bill.

Australian and fine Cape wools have been in steady demand by manufacturers, to supply the liberal orders which they have received for goods.

It appears that the new tariff will be construed by the Treasury Department to restrict the importation of Indias and other wools, which may be used for clothing purposes

MAUGER & AVERY.

Boston, July 1, 1921.

## PULLED WOOLS. (W. A. BLANCHARD.)

	1921.			1920.
	April.	May.	June.	June.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Extra, and Fine A . . . . .	75 @ 85	75 @ 85	70 @ 80	165 @ 180
A Super . . . . .	60 @ 65	55 @ 65	55 @ 65	135 @ 145
B Super . . . . .	40 @ 50	40 @ 50	45 @ 50	90 @ 100
C Super . . . . .	25 @ 30	25 @ 30	25 @ 35	50 @ 60
Fine Combing . . . . .	60 @ 70	60 @ 65	60 @ 65	140 @ 150
Medium Combing . . . . .	45 @ 50	45 @ 50	45 @ 50	110 @ 120
Low Combing . . . . .	35 @ 40	35 @ 40	35 @ 40	70 @ 80

## PULLED WOOLS.

There has been a fair demand for pulled wools throughout the quarter and prices have been steady. Sales have kept pace with current production and surplus stocks carried over from the previous year have been reduced in a measure. Medium grades have met with a better demand and have been firmly held; but fine wools have been slower of sale and concessions have been made to buyers. C Supers have been active and have been closely sold up at an advance in price. Pullers report some interest shown in June lambs and a few sales of standard pullings have been made at 45 cents. Western A and B Supers, which are generally offered here in a scoured state, have been slow of sale.

W. A. BLANCHARD.

BOSTON, July 1, 1921.

**BULLETIN**  
OF THE  
**National Association of Wool Manufacturers**  
A QUARTERLY MAGAZINE  
DEVOTED TO THE INTERESTS OF THE NATIONAL WOOL INDUSTRY.

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VOL. LI.]

BOSTON, OCTOBER, 1921.

[No. IV.]

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SOME NEW FORMS OF HYGROMETRIC AND REGAIN  
TABLES,<sup>1</sup> AND COMMENTS THEREON.

By WILLIAM D. HARTSHORNE.

IN the series of tables here presented, the author has attempted not only to overcome some of the practical difficulties in reading the facts deducible from his Unit System Charts, previously published in this Bulletin and elsewhere, but also to extend the data made thus available to temperatures beyond the limits of the charts themselves, and indeed beyond the limits of verified observations, for the tentative "regain" figures given for high temperature conditions.

In using the charts referred to, there is no difficulty, with good eyesight, in reading them more closely than the thermometers themselves as ordinarily graduated can be accurately read. Yet, when a large number of successive observations are to be taken, it is much easier to tabulate the interpretations obtainable for every unit reading, and interpolate for fractions, than to use the charts themselves. The mere mechanical difficulty, unless a chart is covered by glass or otherwise protected, of using it for many successive observations, without damage by pencil marks, makes it inconvenient to the moving observer to take advantage of their well established accuracy and simplicity.

With specially constructed thermometers, reading to fractions of a degree, corresponding tables of calculations might have been made to any limit desired, but where, as in mill practice, an error of one-half degree in a temperature reading is generally of no consequence, mental interpolations in the tables as given will generally be found sufficiently accurate.

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Moreover, in the first series of tables the thermometer differences are the immediate key to the proper regain reading, without resort first to the same thermometer readings to record the relative humidity, upon which the "regain" figures depend.

To cover the different ranges of facts usually desired, the tables are arranged in three series. The titles on each table are sufficiently clear to be understood without further explanation in the text. They may be enumerated as follows:

*Series 1* consists of four tables covering the range of data obtainable through the ordinary wet and dry bulb Psychrometers of the sling or fan driven type as used in textile mill practice by a moving observer for a range of temperatures from 35 degrees to 110 degrees, Fahrenheit scale.

*Series 2* covers the same range of temperatures, but is based upon dewpoint observations and corresponding relative humidities 5 per cent apart.

*Series 3* covers by similar methods of calculation the corresponding deducible data for temperatures from 100 degrees to 250 degrees, Fahrenheit scale.

It is true that the probable error at the higher temperatures (that is, beyond 110 degrees Fahrenheit) may be relatively large, but its amount as a measure of weight from a commercial standpoint is negligible. The data given are especially intended to afford means of further study and research upon the physical and chemical conditions tending to improve or injure the quality of the material subjected to these higher temperatures. Their study is important as related to questions of dimension, strength, and elasticity, as well as luster and other finishing problems, where the complicated factors of twist and weave need careful correlation to eliminate much of the unverified opinion and much of the rule of thumb uncertainties of manufacture. The work of the various departments of the United States Government, including the Bureau of Standards, might, with advantage, be thus correlated with the work done by Committee D-13 of the American Society for Testing Materials and with some very important work done in the various textile schools and private laboratories.

It is hoped that these tables may aid in such correlation and in further research.\*

## NOTE:\*

To those interested in the historical development of the subject of "regain" and the technical factors involved, the following references to the author's papers as published at successive dates may be useful.

- (1) 1905. Some Comparative Data on Moisture in Cotton and Worsted: Transactions of the New England Cotton Manufacturers Association, Vol. 79, page 194.
- (2) 1911. Laws of Regain in Cotton and Worsted: Transactions of The National Association of Cotton Manufacturers, Vol. 90, page 281.
- (3) 1915. Unit System Charts: Bulletin of The National Association of Wool Manufacturers, Vol. 45, page 93.
- (4) 1915. The same reprinted in Transactions of the National Association of Cotton Manufacturers, Vol. 98, page 254.
- (5) 1917. The Moisture Content of Textiles and Some of its Effects: Transactions American Society Mechanical Engineers, Vol. 39, page 1073.

The nomenclature, origin, and explanation of formulae used, with authorities quoted or referred to, will be found in the text, notes, or appendices of above papers; the latest (1917) was intended as a revision and summary of those previously published, with other abridged information upon the subject treated, so far as then verified by the author.

He wishes to call attention, however, to an excellent monograph not referred to in any of the enumerated papers, which has just been brought to his attention. It is entitled "Principles of Drying Lumber at Atmospheric Pressure," by Henry D. Tieman, published in 1912 by the United States Department of Agriculture, Forest Service Bulletin No. 104.

This gives a well constructed diagram for relative and absolute humidity and other data covering temperatures from 30 degrees below zero to 220 degrees F. above zero. This document agrees closely with the author's calculations and interpretations expressed in the present tables, and with his ideas and experience concerning the drying of textile materials at high and low temperatures.

HARTSHORNE'S 1921 TABLES - SERIES I - CLEAN WOOL REGAINS																	
t-t'	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	t-t'
0	36.01	35.47	34.95	34.43	33.93	33.44	32.97	32.50	32.04	31.60	31.17	30.74	30.33	29.92	29.52	29.13	0
1	26.6	26.6	26.8	26.8	26.8	26.7	26.5	26.3	26.2	26.0	25.8	25.5	25.3	25.1	24.8	24.6	1
2	22.8	23.2	23.6	23.7	23.9	24.0	23.9	23.9	23.8	23.7	23.6	23.5	23.3	23.1	22.9	22.8	2
3	20.0	20.5	21.1	21.4	21.7	21.9	22.0	22.0	22.0	22.0	22.0	21.9	21.8	21.7	21.5	21.4	3
4	17.5	18.4	19.0	19.5	19.9	20.1	20.4	20.5	20.6	20.6	20.6	20.6	20.5	20.4	20.4	20.3	4
5	15.2	16.4	17.3	17.8	18.3	18.7	19.0	19.1	19.3	19.4	19.5	19.5	19.5	19.4	19.3	19.3	5
6	13.2	14.6	15.6	16.3	16.9	17.3	17.7	18.0	18.2	18.3	18.4	18.4	18.5	18.5	18.5	18.4	6
7	11.3	13.0	14.1	14.9	15.6	16.1	16.6	16.9	17.2	17.3	17.5	17.6	17.6	17.6	17.6	17.6	7
8	9.4	11.4	12.6	13.6	14.4	15.0	15.5	15.9	16.2	16.4	16.6	16.7	16.8	16.9	16.9	16.9	8
9	7.4	9.8	11.3	12.4	13.2	13.9	14.5	15.0	15.3	15.6	15.8	16.0	16.1	16.2	16.2	16.2	9
10	5.3	8.1	10.0	11.2	12.2	12.9	13.6	14.1	14.5	14.8	15.0	15.2	15.4	15.5	15.6	15.6	10
11	2.0	6.4	8.6	10.0	11.1	12.0	12.7	13.2	13.7	14.0	14.3	14.6	14.7	14.8	14.9	15.0	11
12		4.4	7.2	8.9	10.1	11.1	11.9	12.5	13.0	13.3	13.7	13.9	14.1	14.3	14.4	14.5	12
13			5.8	7.7	9.1	10.2	11.0	11.7	12.2	12.7	13.0	13.3	13.5	13.7	13.8	13.9	13
14			3.9	6.5	8.1	9.3	10.2	11.0	11.6	12.0	12.4	12.7	13.0	13.2	13.3	13.4	14
15				5.1	7.1	8.4	9.5	10.3	10.9	11.4	11.8	12.2	12.5	12.7	12.8	13.0	15
16				3.5	6.0	7.5	8.7	9.6	10.3	10.8	11.3	11.6	11.9	12.2	12.4	12.5	16
17					4.8	6.6	7.9	8.9	9.6	10.2	10.7	11.1	11.4	11.7	11.9	12.1	17
18					3.3	5.6	7.1	8.2	9.0	9.7	10.2	10.6	11.0	11.3	11.5	11.7	18
19						4.6	6.3	7.5	8.4	9.1	9.7	10.1	10.5	10.8	11.1	11.3	19
20						3.4	5.4	6.8	7.8	8.6	9.2	9.7	10.1	10.4	10.7	10.9	20
21						1.3	4.5	6.1	7.2	8.0	8.7	9.2	9.6	10.0	10.3	10.5	21
22							3.4	5.3	6.6	7.5	8.2	8.8	9.2	9.6	9.9	10.1	22
23							1.9	4.5	5.9	6.9	7.7	8.3	8.8	9.2	9.5	9.8	23
24								3.6	5.2	6.4	7.2	7.9	8.4	8.8	9.2	9.4	24
25								2.4	4.5	5.8	6.7	7.4	8.0	8.4	8.8	9.1	25
26								3.8	5.2	6.2	7.0	7.6	8.1	8.5	8.8	9.1	26
27								2.8	4.6	5.7	6.6	7.2	7.7	8.1	8.4	8.7	27
28								1.5	3.9	5.2	6.1	6.8	7.3	7.8	8.1	8.4	28
29									3.1	4.6	5.7	6.4	7.0	7.4	7.8	8.1	29
30									2.2	4.1	5.2	6.0	6.6	7.1	7.5	7.9	30
31										3.4	4.7	5.6	6.3	6.8	7.2	7.6	31
32										2.7	4.2	5.2	5.9	6.5	6.9	7.3	32
33										1.7	3.7	4.7	5.5	6.1	6.7	7.1	33
34											3.0	4.3	5.2	5.8	6.3	6.7	34
35											2.3	3.8	4.8	5.5	6.0	6.5	35
36											1.4	3.3	4.4	5.1	5.7	6.2	36
37												2.8	4.0	4.8	5.4	5.9	37
38												2.1	3.5	4.4	5.1	5.6	38
39													3.1	4.1	4.6	5.1	39
40														2.5	3.7	4.5	40

CLEAN WOOL REGAIN TABLE No 1.

SHOWING PER CENT MOISTURE CONTENT FIGURED ON THE "BONE DRY" WEIGHT WHEN MATERIAL IS IN EQUILIBRIUM WITH SURROUNDING ATMOSPHERE, ARRANGED FOR TEMPERATURES 5° APART FROM 35° TO 110° F AND FOR EACH DEGREE DIFFERENCE (t-t') BETWEEN DRY AND WET BULB ON SLING HYGROMETERS OR THEIR EQUIVALENT.

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HARTSHORNE'S 1921 TABLES - SERIES I - COTTON REGAINS.

HARTSHORNE'S 1921 TABLES - SERIES I - COTTON REGAINS.																			
t-t'	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	t-t'		
0	22.07	21.84	21.62	21.41	21.20	21.00	20.80	20.60	20.41	20.22	20.03	19.85	19.67	19.50	19.32	19.15	0		
1	15.5	15.6	15.9	16.0	16.1	16.2	16.2	16.2	16.2	16.1	16.1	16.0	16.0	15.9	15.8	15.8	1		
2	12.7	13.1	13.6	13.7	14.0	14.1	14.3	14.3	14.4	14.4	14.5	14.5	14.4	14.4	14.4	14.4	2		
3	10.8	11.2	11.7	12.1	12.4	12.7	12.8	13.0	13.1	13.2	13.2	13.3	13.3	13.3	13.3	13.3	3		
4	9.1	9.8	10.3	10.7	11.1	11.4	11.7	11.8	12.0	12.1	12.2	12.3	12.4	12.4	12.4	12.4	4		
5	7.6	8.4	9.1	9.5	10.0	10.3	10.6	10.9	11.1	11.2	11.2	11.3	11.5	11.5	11.7	11.7	5		
6	6.5	7.4	8.0	8.5	9.0	9.4	9.7	10.0	10.2	10.4	10.6	10.7	10.8	10.9	11.0	11.0	6		
7	5.6	6.4	7.1	7.7	8.1	8.6	9.0	9.2	9.5	9.7	9.9	10.1	10.2	10.3	10.4	10.4	7		
8	4.7	5.7	6.3	6.9	7.4	7.8	8.2	8.6	8.9	9.1	9.3	9.4	9.6	9.7	9.8	9.9	8		
9	3.8	4.9	5.6	6.2	6.7	7.1	7.6	7.9	8.2	8.5	8.7	8.9	9.1	9.2	9.3	9.4	9		
10	2.7	4.1	5.0	5.6	6.1	6.6	7.0	7.4	7.7	7.9	8.2	8.4	8.6	8.7	8.8	8.9	10		
11	1.0	3.3	4.4	5.0	5.6	6.1	6.5	6.9	7.2	7.5	7.7	7.9	8.1	8.3	8.4	8.5	11		
12		2.3	3.7	4.5	5.1	5.6	6.0	6.4	6.7	7.0	7.3	7.5	7.7	7.8	8.0	8.1	12		
13			3.0	3.9	4.6	5.2	5.6	6.0	6.3	6.6	6.9	7.1	7.3	7.5	7.6	7.7	13		
14			2.1	3.4	4.2	4.7	5.2	5.6	5.9	6.2	6.5	6.7	6.9	7.1	7.3	7.4	14		
15				2.7	3.7	4.3	4.8	5.2	5.6	5.9	6.2	6.4	6.6	6.8	6.9	7.1	15		
16				1.9	3.1	3.9	4.5	4.9	5.3	5.6	5.8	6.1	6.3	6.5	6.6	6.8	16		
17					2.5	3.5	4.1	4.6	4.9	5.3	5.5	5.8	6.0	6.2	6.4	6.5	17		
18					1.7	3.0	3.7	4.2	4.7	5.0	5.3	5.5	5.7	5.9	6.1	6.2	18		
19						2.4	3.3	3.9	4.4	4.7	5.0	5.3	5.5	5.7	5.8	6.0	19		
20						1.8	2.9	3.6	4.1	4.5	4.8	5.0	5.3	5.4	5.6	5.8	20		
21							2.4	3.2	3.8	4.2	4.5	4.8	5.0	5.2	5.4	5.5	21		
22							1.9	2.8	3.5	3.9	4.3	4.6	4.8	5.0	5.2	5.4	22		
23							1.0	2.4	3.2	3.7	4.1	4.4	4.6	4.8	5.0	5.2	23		
24								2.0	2.8	3.4	3.8	4.1	4.4	4.6	4.8	5.0	24		
25								1.3	2.4	3.1	3.6	3.9	4.2	4.4	4.6	4.8	25		
26									2.1	2.8	3.3	3.7	4.0	4.3	4.5	4.6	26		
27								1.5		2.5	3.1	3.5	3.8	4.1	4.3	4.5	27		
28									1.7	2.5	3.1	3.5	3.8	4.1	4.3	4.5	28		
29									1.2	2.2	2.8	3.2	3.6	3.9	4.1	4.3	29		
30										1.9	2.5	3.1	3.4	3.7	4.0	4.2	30		
31											1.5	2.2	2.8	3.2	3.6	3.8	31		
32												2.0	2.6	3.0	3.3	3.5	32		
33												1.7	2.4	2.8	3.2	3.4	33		
34													1.3	2.1	2.6	3.0	34		
35														1.9	2.4	2.8	3.1	35	
36														1.5	2.2	2.6	3.0	36	
37														1.2	2.0	2.5	2.8	37	
38															1.7	2.3	2.7	38	
39																1.4	2.1	2.5	39
40																			40

COTTON REGAIN TABLE No. 1

SHOWING PER CENT MOISTURE CONTENT FIGURED ON THE "BONE DRY" WEIGHT WHEN MATERIAL IS IN EQUILIBRIUM WITH SURROUNDING ATMOSPHERE, ARRANGED FOR TEMPERATURES 5° APART FROM 35° TO 110° F AND FOR EACH DEGREE DIFFERENCE (t-t') BETWEEN DRY AND WET BULB ON SLING HYGROMETERS OR THEIR EQUIVALENT.

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100-32

HARTSHORNE'S 1921 TABLES - SERIES 1 - RELATIVE HUMIDITY																	
t-t'	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	t-t'
0	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0
1	90.6	91.5	92.6	93.3	93.9	94.4	94.8	95.0	95.5	95.7	95.9	96.1	96.3	96.4	96.6	96.7	1
2	81.3	83.4	85.5	86.6	87.9	88.9	89.7	90.4	90.9	91.4	91.9	92.3	92.6	92.9	93.2	93.5	2
3	72.4	75.2	78.1	80.2	81.8	83.4	84.6	85.7	86.5	87.3	88.0	88.6	89.0	89.5	89.9	90.3	3
4	63.0	67.5	71.0	73.8	76.0	78.0	79.7	81.0	82.2	83.2	84.1	84.9	85.5	86.1	86.7	87.2	4
5	53.7	59.6	64.3	67.3	70.4	72.8	74.8	76.5	78.0	79.2	80.4	81.3	82.1	82.9	83.5	84.1	5
6	44.8	52.2	57.3	61.2	64.6	67.7	70.1	72.1	73.8	75.4	76.7	77.8	78.6	79.7	80.5	81.2	6
7	35.9	44.5	50.5	55.4	59.3	62.6	65.5	67.8	69.9	71.5	73.1	74.4	75.5	76.5	77.4	78.3	7
8	27.1	37.2	43.8	49.2	53.9	57.6	60.9	63.5	65.9	67.8	69.6	71.0	72.3	73.5	74.5	75.4	8
9	18.3	29.5	37.4	43.4	48.6	52.7	56.4	59.4	62.0	64.1	66.1	67.7	69.2	70.5	71.6	72.7	9
10	10.0	21.6	31.0	37.6	43.2	48.1	52.0	55.3	58.1	60.6	62.7	64.5	66.1	67.5	68.6	69.9	10
11	1.7	14.6	24.7	32.0	38.2	43.4	47.7	51.3	54.4	57.0	59.4	61.4	63.1	64.6	66.0	67.3	11
12		7.3	16.3	26.4	33.3	38.8	43.5	47.5	50.8	53.7	56.1	58.3	60.2	61.9	63.3	64.6	12
13			12.3	20.9	28.2	34.3	39.3	43.6	47.2	50.3	53.0	55.3	57.3	59.1	60.7	62.1	13
14			6.0	15.6	23.3	29.6	35.2	39.8	43.7	47.0	49.9	52.4	54.5	56.4	58.1	59.6	14
15				10.4	18.7	25.4	31.3	36.1	40.3	43.8	46.8	49.4	51.8	53.8	55.6	57.2	15
16				5.1	13.8	21.1	27.4	32.5	36.9	40.6	43.6	46.7	49.1	51.2	53.1	54.8	16
17				9.2	17.1	24.5	29.0	33.7	37.6	41.0	43.9	46.5	48.7	50.7	52.5	54.2	17
18				4.6	12.8	19.8	25.4	30.4	34.5	38.2	41.2	43.9	46.3	48.3	50.2	52.0	18
19					8.8	16.0	22.0	27.2	31.6	35.3	38.5	41.4	43.8	46.0	48.0	50.0	19
20				4.9	12.3	18.7	24.1	28.6	32.6	36.0	38.9	41.5	43.7	45.8	47.8	49.8	20
21				8.7	15.4	21.1	25.8	29.9	33.4	36.5	39.2	41.5	43.6	45.6	47.6	49.6	21
22				5.3	12.2	18.0	23.0	27.3	31.0	34.1	36.9	39.4	41.6	43.6	45.6	47.6	22
23				1.8	9.0	15.0	20.3	24.7	28.5	31.6	34.7	37.3	39.5	41.6	43.6	45.6	23
24					5.9	12.2	17.6	22.2	26.1	29.5	32.6	35.2	37.6	39.6	41.6	43.6	24
25					2.8	9.4	14.9	19.7	23.8	27.3	30.4	33.2	35.6	37.6	39.6	41.6	25
26					6.6	12.4	17.3	21.5	25.1	28.4	31.2	33.7	36.1	38.5	40.9	43.3	26
27					3.9	9.8	14.9	19.3	23.1	26.3	29.3	31.8	34.2	36.6	39.0	41.4	27
28					1.2	7.3	12.6	17.1	21.0	24.4	27.4	30.2	32.8	35.4	38.0	40.6	28
29						4.8	10.3	14.9	18.9	22.4	25.5	28.2	30.8	33.4	36.0	38.6	29
30						2.5	8.0	12.8	16.9	20.5	23.7	26.4	29.0	31.6	34.2	36.8	30
31							5.9	10.8	15.0	18.6	21.9	24.7	27.3	29.9	32.5	35.1	31
32							3.7	8.8	13.1	16.9	20.1	23.1	25.7	28.3	30.9	33.5	32
33							1.6	6.8	11.2	15.1	18.4	21.7	24.7	27.7	30.7	33.7	33
34								4.8	9.4	13.3	16.8	19.8	22.8	25.8	28.8	31.8	34
35								2.9	7.6	11.6	15.1	18.2	21.2	24.2	27.2	30.2	35
36								1.0	5.8	9.9	13.5	16.7	19.7	22.7	25.7	28.7	36
37									4.1	8.3	12.0	15.2	18.2	21.2	24.2	27.2	37
38									2.4	6.7	10.5	13.7	16.7	19.7	22.7	25.7	38
39																	39
40																	40

RELATIVE HUMIDITY TABLE No.1

SHOWING PERCENT OF RELATIVE HUMIDITY IN THE ATMOSPHERE (BAROMETER AT 30") CALCULATED FOR EACH DEGREE DIFFERENCE (t-t') BETWEEN WET AND DRY BULB ON SLING HYGROMETERS OR THEIR EQUIVALENT.

THE FORMULA USED MAY BE FOUND IN AUTHOR'S PAPER ON "UNIT SYSTEM CHARTS"(1915)

THE TABLE IS INTENDED TO SUPPLEMENT THE CHARTS AND TO AVOID THE NECESSITY OF REFERRING TO THEM OR OTHER TABLES DEPENDING UPON WET AND DRY BULB DIFFERENCES.

## RELATIVE HUMIDITY TABLE No. 1

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HARTSHORNE'S 1921 TABLES - SERIES I - ABSOLUTE HUMIDITY																		
t-t'	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	t-t'	
0	2.37	2.85	3.41	4.08	4.85	5.75	6.78	7.98	9.36	10.93	12.74	14.79	17.12	19.77	22.75	26.11	0	
1	2.14	2.61	3.16	3.80	4.56	5.42	6.43	7.58	8.93	10.46	12.21	14.21	16.48	19.06	21.97	25.26	1	
2	1.92	2.38	2.92	3.53	4.26	5.11	6.08	7.21	8.51	10.00	11.71	13.65	15.86	18.36	21.21	24.51	2	
3	1.71	2.14	2.67	3.27	3.97	4.79	5.74	6.84	8.09	9.54	11.21	13.10	15.25	17.69	20.46	23.57	3	
4	1.49	1.92	2.43	3.01	3.69	4.48	5.41	6.47	7.69	9.10	10.72	12.56	14.65	17.02	19.72	22.76	4	
5	1.27	1.71	2.20	2.74	3.42	4.18	5.07	6.10	7.30	8.66	10.24	12.02	14.06	16.38	19.00	21.97	5	
6	1.06	1.49	1.96	2.50	3.14	3.89	4.75	5.75	6.91	8.24	9.77	11.50	13.49	15.75	18.30	21.19	6	
7	.85	1.27	1.72	2.26	2.87	3.60	4.44	5.41	6.54	7.82	9.31	11.00	12.93	15.12	17.61	20.44	7	
8	.64	1.06	1.50	2.01	2.62	3.31	4.13	5.07	6.17	7.41	8.86	10.50	12.38	14.42	16.94	19.69	8	
9	.43	.84	1.28	1.68	2.36	3.03	3.82	4.74	5.80	7.01	8.42	10.02	11.85	13.93	16.29	18.97	9	
10	.24	.62	1.06	1.54	2.10	2.76	3.53	4.41	5.44	6.62	7.98	9.54	11.32	13.35	15.65	18.26	10	
11		.42	.84	1.30	1.85	2.49	3.24	4.10	5.09	6.24	7.57	9.08	10.80	12.78	15.02	17.56	11	
12		.21	.63	1.08	1.61	2.23	2.95	3.79	4.75	5.87	7.15	8.62	10.31	12.23	14.40	16.88	12	
13			.42	.85	1.37	1.97	2.66	3.46	4.42	5.50	6.75	8.18	9.82	11.69	13.81	16.22	13	
14			.20	.64	1.13	1.71	2.39	3.18	4.09	5.14	6.35	7.75	9.34	11.16	13.22	15.56	14	
15				.42	.91	1.46	2.12	2.88	3.77	4.79	5.97	7.31	8.87	10.63	12.64	14.93	15	
16				.21	.67	1.21	1.86	2.60	3.45	4.44	5.58	6.90	8.40	10.12	12.08	14.31	16	
17				.45	.98	1.59	2.31	3.15	4.11	5.22	6.49	7.95	9.63	11.53	13.70	17	17	
18				.22	.74	1.34	2.03	2.85	3.77	4.86	6.09	7.51	9.14	11.00	13.11	18	18	
19				.50	1.10	1.76	2.54	3.45	4.50	5.70	7.09	8.67	10.47	12.53	14.81	19	19	
20			.26	.83	1.49	2.25	3.13	4.15	5.32	6.66	8.20	9.95	11.95	14.20	16.65	20	20	
21			.05	.59	1.23	1.97	2.82	3.81	4.94	6.25	7.74	9.45	11.40	13.60	16.05	21	21	
22				.36	.97	1.69	2.52	3.48	4.58	5.84	7.30	8.96	10.86	12.96	15.36	22	22	
23				.72	1.41	2.22	3.15	4.22	5.44	6.86	8.48	10.33	12.43	14.83	17.53	23	23	
24				.12				.47	1.14	1.92	2.83	3.86	5.06	6.44	8.01	9.81	24	24
25								.22	.88	1.63	2.51	3.51	4.68	6.01	7.55	9.29	25	25
26									.62	1.35	2.20	3.18	4.31	5.61	7.09	8.79	26	26
27									.36	1.08	1.90	2.85	3.95	5.21	6.65	8.31	27	27
28									.11	.80	1.61	2.53	3.60	4.81	6.22	7.83	28	28
29										.53	1.31	2.21	3.24	4.43	5.80	7.36	29	29
30									.27	1.02	1.90	2.90	4.06	5.30	6.90	8.60	30	30
31										.75	1.59	2.56	3.68	4.98	6.46	8.16	31	31
32									.47	1.29	2.24	3.34	4.58	6.02	7.62	9.32	32	32
33								.20	1.00	1.92	2.98	4.19	5.65	7.35	9.15	11.05	33	33
34									.71	1.61	2.63	3.81	5.18	6.75	8.55	10.45	34	34
35								.43	1.30	2.29	3.44	4.76	6.22	7.83	9.55	11.35	35	35
36								.15	.99	1.96	3.08	4.37	5.80	7.36	9.05	10.85	36	36
37									.70	1.64	2.73	3.97	5.30	6.86	8.55	10.35	37	37
38									.41	1.32	2.38	3.58	4.91	6.46	8.16	9.96	38	38
39									.12	1.01	2.03	3.21	4.55	6.01	7.55	9.25	39	39
40										.70	1.70	2.84	4.05	5.51	7.05	8.65	40	40

ABSOLUTE HUMIDITY TABLE No. 1

SHOWING GRAINS OF MOISTURE (TO NEAREST 1/100) PER CUBIC FOOT FOR THE CORRESPONDING RELATIVE HUMIDITIES TO BE FOUND IN RELATIVE HUMIDITY TABLE No. 1 FOR SAME WET AND DRY BULB DIFFERENCES AND IS INTENDED TO SUPPLEMENT HIS 'UNIT SYSTEM CHARTS' WHICH CAN BE USED ONLY FOR A LESS CLOSE READING AND ALSO TO AVOID THE NECESSITY IN ORDINARY MILL PRACTICE OF REFERRING TO ANY OTHER TABLES WITHIN THESE LIMITS OF TEMPERATURE.

## ABSOLUTE HUMIDITY TABLE No. 1

SHOWING GRAINS OF MOISTURE (TO NEAREST 1/100) PER CUBIC FOOT FOR THE CORRESPONDING RELATIVE HUMIDITIES TO BE FOUND IN RELATIVE HUMIDITY TABLE No. 1 FOR SAME WET AND DRY BULB DIFFERENCES AND IS INTENDED TO SUPPLEMENT HIS UNIT SYSTEM CHARTS WHICH CAN BE USED ONLY FOR A LESS CLOSE READING AND ALSO TO AVOID THE NECESSITY IN ORDINARY MILL PRACTICE OF REFERRING TO ANY OTHER TABLES WITHIN THESE LIMITS OF TEMPERATURE.

RELATIVE HUMIDITY		HARTSHORNE'S 1921 TABLES - SERIES 2 - CLEAN WOOL REGAINS														RELATIVE HUMIDITY		
100 $\frac{R}{H}$ = H		35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	100 $\frac{R}{H}$ = H
100	36.01	35.47	34.95	34.43	33.93	33.44	32.97	32.50	32.04	31.60	31.17	30.74	30.33	29.92	29.52	29.13	28.74	100
95	29.1	28.7	28.3	27.8	27.4	27.0	26.7	26.3	25.9	25.5	25.2	24.9	24.5	24.2	23.9	23.6	23.3	95
90	26.3	25.9	25.5	25.1	24.8	24.4	24.1	23.7	23.4	23.1	22.8	22.5	22.1	21.9	21.6	21.3	21.0	90
85	24.2	23.8	23.4	23.1	22.8	22.4	22.1	21.8	21.5	21.2	20.9	20.6	20.3	20.1	19.8	19.5	19.2	85
80	22.4	22.0	21.7	21.4	21.1	20.8	20.5	20.2	19.9	19.6	19.3	19.1	18.8	18.6	18.3	18.1	17.8	80
75	20.8	20.4	20.1	19.8	19.6	19.3	19.0	18.7	18.5	18.2	18.0	17.7	17.5	17.2	17.0	16.8	16.5	75
70	19.3	19.0	18.7	18.5	18.2	17.9	17.7	17.4	17.2	16.9	16.7	16.5	16.3	16.0	15.8	15.6	15.3	70
65	18.0	17.7	17.4	17.2	16.9	16.7	16.4	16.2	16.0	15.8	15.5	15.3	15.1	14.9	14.7	14.5	14.3	65
60	16.7	16.5	16.2	16.0	15.7	15.5	15.3	15.1	14.9	14.7	14.5	14.3	14.1	13.9	13.7	13.5	13.3	60
55	15.5	15.3	15.1	14.8	14.6	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.1	12.9	12.7	12.6	12.4	55
50	14.4	14.2	14.0	13.7	13.5	13.4	13.2	13.0	12.8	12.6	12.4	12.3	12.1	11.9	11.8	11.6	11.5	50
45	13.3	13.1	12.9	12.7	12.5	12.3	12.1	12.0	11.8	11.6	11.5	11.3	11.2	11.0	10.9	10.7	10.6	45
40	12.2	12.0	11.8	11.7	11.5	11.3	11.2	11.0	10.9	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.8	40
35	11.1	11.0	10.8	10.6	10.5	10.3	10.2	10.0	9.9	9.8	9.6	9.5	9.4	9.2	9.1	9.0	8.9	35
30	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.5	8.4	8.2	8.1	8.0	30
25	9.0	8.8	8.7	8.6	8.5	8.3	8.2	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	25
20	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	20
15	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.7	5.6	5.5	5.4	5.4	5.3	15
10	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.3	4.2	10
5	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	5

## CLEAN WOOL REGAIN TABLE No. 2. (TO NEAREST 1/10 OF 1 %)

ARRANGED FOR 5° INTERVALS OF TEMPERATURE FROM 35° TO 110° F.  
 AND FOR 5% INTERVALS FOR VALUES OF RELATIVE HUMIDITY ( $H=100\frac{R}{H}$  OR HOWEVER OBTAINED)  
 CALCULATIONS FOR REGAINS ( $R$ ) ARE BASED UPON THE FORMULA  $R = R' \sqrt{\frac{K_1 R_2}{K_2 R_1}}$ ,  
 WHERE FOR 70° F. AND  $H = 100\%$ ,  $K_1 R_2 = 3890$ .

FOR TEMPERATURES BETWEEN 40° AND 100° F. THE RESULTS MAY BE  
 READ DIRECTLY ON THE UNIT CHART CORRESPONDING AND FOR INTERMEDIATE  
 TEMPERATURES OR VALUES OF  $H$  INTERPOLATIONS ARE READILY MADE WITH  
 EQUAL ACCURACY.

THIS TABLE CARRIES THE RELATIONS EXPRESSED TO THE LIMITS OF  
 ORDINARY MILL PRACTICE.

HARTSHORNE'S 1921 TABLES - SERIES 2 - COTTON REGAINS																		
RELATIVE HUMIDITY		RELATIVE HUMIDITY																
100% = H		35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	100% = H
100	22.07	21.84	21.62	21.41	21.20	21.00	20.80	20.60	20.41	20.22	20.03	19.85	19.67	19.50	19.32	19.15	19.00	100
95	17.3	17.1	16.9	16.8	16.6	16.4	16.3	16.1	16.0	15.8	15.7	15.5	15.4	15.3	15.1	15.0	95	95
90	15.2	15.1	14.9	14.8	14.6	14.5	14.4	14.2	14.1	14.0	13.8	13.7	13.6	13.5	13.3	13.2	90	90
85	13.7	13.6	13.4	13.3	13.2	13.0	12.9	12.8	12.7	12.6	12.4	12.3	12.2	12.1	12.0	11.9	85	85
80	12.4	12.3	12.2	12.1	12.0	11.8	11.7	11.6	11.5	11.4	11.3	11.2	11.1	11.0	10.9	10.8	80	80
75	11.3	11.2	11.1	11.0	10.9	10.8	10.7	10.6	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.8	75	75
70	10.3	10.2	10.1	10.0	9.9	9.8	9.7	9.6	9.5	9.5	9.4	9.3	9.2	9.1	9.0	9.0	70	70
65	9.4	9.3	9.2	9.1	9.0	9.0	8.9	8.8	8.7	8.6	8.5	8.5	8.4	8.3	8.2	8.2	65	65
60	8.6	8.5	8.4	8.3	8.2	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.6	7.6	7.5	7.4	60	60
55	7.8	7.6	7.7	7.6	7.5	7.5	7.4	7.3	7.3	7.2	7.1	7.1	7.0	6.9	6.9	6.8	55	55
50	7.2	7.1	7.0	7.0	6.9	6.8	6.8	6.7	6.6	6.6	6.5	6.5	6.4	6.3	6.3	6.2	50	50
45	6.5	6.5	6.4	6.4	6.3	6.2	6.2	6.1	6.1	6.0	5.9	5.9	5.8	5.8	5.7	5.7	45	45
40	6.0	5.9	5.9	5.8	5.8	5.7	5.7	5.6	5.6	5.5	5.5	5.4	5.4	5.3	5.3	5.2	40	40
35	5.5	5.4	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.0	5.0	4.9	4.9	4.9	4.8	4.8	35	35
30	5.0	4.9	4.9	4.8	4.8	4.7	4.7	4.7	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	30	30
25	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	3.9	3.9	25	25
20	4.0	3.9	3.9	3.9	3.8	3.8	3.7	3.7	3.7	3.6	3.6	3.6	3.5	3.5	3.5	3.4	20	20
15	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	3.0	15	15
10	2.7	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.4	10	10
5	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	5	5

## COTTON REGAIN TABLE No. 2 (TO NEAREST 1/10 OF 1%)

ARRANGED FOR 5° INTERVALS OF TEMPERATURE FROM 35° TO 110°F.

AND 5% INTERVALS FOR VALUES OF RELATIVE HUMIDITY ( $H=100\frac{R}{R_1}$  OR HOWEVER OBTAINED)CALCULATIONS FOR REGAINS ( $R$ ) ARE BASED UPON THE FORMULA  $R = R_1 \frac{T}{T_1}$ FOR  $R_1$  AND  $T_1$  AT  $t = 70^\circ\text{F}$ . AND FOR THE TEMPERATURES BETWEEN  $40^\circ$  AND  $100^\circ\text{F}$ .

THE RESULTS MAY BE READ DIRECTLY ON THE CORRESPONDING UNIT SYSTEM

CHART AND INTERPOLATIONS MADE WITH EQUAL ACCURACY.

THIS TABLE CARRIES THE RELATIONS EXPRESSED TO THE LIMITS OF

ORDINARY MILL PRACTICE.



RELATIVE HUMIDITY		HARTSHORNE'S 1921 TABLES - SERIES 2 - DEWPOINT TEMPERATURES														RELATIVE HUMIDITY		
100 $\frac{E}{H}$ = H		35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	100 $\frac{E}{H}$ = H
100	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0	105.0	110.0	100	
95	33.8	38.8	43.6	48.7	53.5	58.5	63.5	68.5	73.5	78.4	83.4	88.4	93.4	98.3	103.3	108.2	95	
90	32.4	37.3	42.2	47.2	52.1	57.0	61.9	66.9	71.9	76.8	81.7	86.6	91.6	96.5	101.5	106.4	90	
85	31.1	35.9	40.7	45.7	50.5	55.5	60.4	65.3	70.2	75.1	79.9	84.9	89.8	94.7	99.6	104.5	85	
80	29.7	34.4	39.1	44.1	49.0	53.8	58.6	63.5	68.4	73.3	78.1	83.0	87.9	92.7	97.6	102.4	80	
75	28.3	32.7	37.6	42.4	47.2	52.1	56.9	61.7	66.6	71.4	76.2	81.0	85.8	90.7	95.5	100.3	75	
70	26.9	31.1	35.8	40.5	45.4	50.1	54.9	59.7	64.6	69.3	74.1	78.9	83.7	88.5	93.3	98.0	70	
65	25.3	29.6	33.9	38.7	43.4	48.2	52.9	57.6	62.4	67.1	71.9	76.6	81.4	86.1	90.8	95.6	65	
60	23.8	27.7	31.9	36.6	41.3	46.0	50.8	55.4	60.2	64.9	69.6	74.3	78.9	83.6	88.3	93.0	60	
55	21.8	26.0	30.0	34.3	39.1	43.7	48.4	53.1	57.6	62.4	67.0	71.7	76.3	80.9	85.6	90.2	55	
50	19.9	24.0	27.9	32.0	36.6	41.3	45.9	50.5	55.1	59.7	64.3	68.9	73.5	78.0	82.6	87.2	50	
45	17.5	21.6	25.7	29.7	33.9	38.6	43.0	47.6	52.2	56.8	61.2	65.8	70.3	74.9	79.4	83.9	45	
40	15.0	19.3	23.2	27.1	31.1	35.5	39.9	44.5	48.9	53.5	57.9	62.4	66.9	71.3	75.8	80.2	40	
35	12.3	16.3	20.3	24.3	28.1	32.1	36.6	41.0	45.5	49.8	54.2	58.6	63.0	67.4	71.8	76.2	35	
30	9.3	13.1	17.0	21.0	25.0	28.7	32.6	37.1	42.3	45.8	50.0	54.3	58.7	63.0	67.3	71.6	30	
25	5.8	9.7	13.4	17.2	21.0	24.9	28.6	32.4	36.8	41.0	45.2	49.4	53.6	57.8	62.0	66.3	25	
20	1.4	5.0	9.0	12.6	16.2	20.0	23.8	27.4	31.1	35.1	39.3	43.5	47.6	51.8	55.9	59.9	20	
15	-4.4	-0.6	3.3	6.9	10.6	14.2	17.3	21.4	25.0	28.4	32.0	36.0	40.0	44.0	48.0	51.9	15	
10	-11.9	-7.8	-4.7	-1.2	2.3	6.2	9.7	12.9	16.5	19.9	23.4	26.7	30.1	33.7	37.4	41.2	10	
5	-24.0	-20.9	-17.0	-13.8	-10.2	-7.0	-3.8	-0.6	2.4	5.8	9.0	12.0	15.3	18.6	21.6	24.8	5	

## DEWPOINT TEMPERATURES

AND CORRESPONDING RELATIVE HUMIDITIES ARRANGED  
 5% APART FOR INITIAL TEMPERATURES 35° TO 110° F. AND  
 5% APART FOR VALUES OF H FROM THE EQUATION:  $100 \frac{E}{H} = H\%$   
 WHERE E = SATURATED OR MAXIMUM VAPOR PRESSURE AT TEMPERATURE t  
 AND H = MAXIMUM VAPOR PRESSURE CORRESPONDING TO THE DEWPOINT TEMPERATURE.  
 (SEE REPORT No. 235, U. S. WEATHER BUREAU.)



RELATIVE HUMIDITY		HARTSHORNE'S 1921 TABLES - SERIES 2 - ABSOLUTE HUMIDITY															RELATIVE HUMIDITY	
100% = H		35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	100% = H
100	420	290	243	205	173	146	124	106	91	78	67	58	50	44	38	33	28	100
95	442	368	306	256	215	182	154	131	112	96	82	71	61	53	46	39	33	95
90	466	389	323	270	227	192	163	138	118	101	87	74	64	56	48	42	36	90
85	494	411	342	286	241	203	172	145	125	107	92	79	68	59	51	45	39	85
80	525	437	363	304	256	216	183	156	133	114	97	84	72	63	54	47	41	80
75	560	466	387	324	273	230	195	166	142	121	104	89	77	67	58	51	45	75
70	600	500	415	347	292	247	209	178	152	130	111	96	83	72	62	54	47	70
65	646	538	447	374	315	265	225	191	163	140	120	103	89	77	67	58	51	65
60	670	563	484	405	341	288	244	207	177	152	130	112	96	84	73	63	56	60
55	763	636	528	442	372	314	266	226	193	165	142	122	105	91	79	69	60	55
50	839	699	561	486	409	345	293	249	212	182	156	134	116	100	87	76	66	50
45	933	777	645	540	454	383	325	277	236	202	173	149	129	111	97	84	74	45
40	1049	874	726	608	511	431	366	311	265	227	195	168	145	125	109	95	84	40
35	1199	999	830	695	584	493	418	356	303	260	223	192	165	143	124	108	95	35
30	1399	1166	968	810	682	575	488	415	354	303	260	223	193	167	145	126	108	30
25	1679	1399	1162	973	818	690	585	498	425	387	312	268	231	201	174	152	125	25
20	2039	1749	1452	1216	1023	863	731	622	531	455	390	335	289	251	218	190	160	20
15	2498	2331	1956	1621	1363	1150	975	830	708	606	520	447	386	324	280	253	215	15
10	3194	3497	2904	2431	2045	1726	1463	1245	1061	910	780	670	579	501	435	379	319	10
5	4394	4994	4008	3408	2926	2452	2026	1719	1459	1245	1061	910	780	670	579	501	435	5
1	41971	34971	29043	24314	20450	17257	14529	12445	10614	9097	7799	6704	5786	5011	4353	3793	3193	1
H		NUMBER OF CUBIC FEET CONTAINING ONE POUND VAPOR AT 100% RELATIVE HUMIDITY															H	
100	2938	2438	2033	1702	1430	1208	1024	871	743	636.8	545.3	469.3	405.0	350.8	304.7	265.5	235.5	100

## ABSOLUTE HUMIDITY TABLE NO. 2.

SHOWING NUMBER OF CUBIC FEET CONTAINING 1000 GRAINS (1/7 OF A POUND) OF VAPOR AT RELATIVE HUMIDITIES INDICATED (BASED ON DATA FROM MARKS AND DAVIS STEAM TABLES)  
A DESIRABLE ARRANGEMENT FOR COMPARING REGAIN FIGURES WITH COUNTS OF YARN OR WEIGHT OF FABRIC AS AFFECTED BY VOLUME OF AIR MOVEMENT.

HARTSHORNE'S 1921 TABLES - SERIES 3 - CLEAN WOOL REGAINS																	RELATIVE HUMIDITY 100 $\frac{H}{H_0}$ = H
RELATIVE HUMIDITY 100 $\frac{H}{H_0}$ = H	100°	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°	250°	100 $\frac{H}{H_0}$ = H
100	29.9	29.1	28.4	27.7	27.0	26.3	25.7	25.1	24.5	23.9	23.4	22.9	22.4	21.9	21.4	21.0	100
95	24.2	23.6	22.9	22.4	21.8	21.3	20.8	20.3	19.8	19.3	18.9	18.5	18.1	17.7	17.3	16.9	95
90	21.9	21.3	20.7	20.2	19.7	19.2	18.8	18.3	17.9	17.5	17.1	16.7	16.3	16.0	15.6	15.3	90
85	20.1	19.5	19.0	18.6	18.1	17.7	17.2	16.8	16.4	16.0	15.7	15.3	15.0	14.7	14.4	14.1	85
80	18.6	18.1	17.6	17.2	16.7	16.3	15.9	15.6	15.2	14.9	14.5	14.2	13.9	13.6	13.3	13.0	80
75	17.2	16.8	16.4	15.9	15.6	15.2	14.8	14.5	14.1	13.8	13.5	13.2	12.9	12.6	12.3	12.1	75
70	16.0	15.6	15.2	14.8	14.5	14.1	13.8	13.4	13.1	12.8	12.5	12.3	12.0	11.7	11.5	11.2	70
65	14.9	14.5	14.2	13.8	13.5	13.1	12.8	12.5	12.2	11.9	11.7	11.4	11.2	10.9	10.7	10.5	65
60	13.9	13.5	13.2	12.8	12.5	12.2	11.9	11.6	11.4	11.1	10.9	10.6	10.4	10.2	9.9	9.7	60
55	12.9	12.6	12.2	11.9	11.6	11.3	11.1	10.8	10.6	10.3	10.1	9.9	9.6	9.4	9.2	9.0	55
50	11.9	11.6	11.3	11.0	10.8	10.5	10.3	10.0	9.8	9.6	9.3	9.1	8.9	8.7	8.5	8.4	50
45	11.0	10.7	10.5	10.2	9.9	9.7	9.5	9.2	9.0	8.8	8.6	8.4	8.2	8.1	7.9	7.7	45
40	10.1	9.9	9.6	9.4	9.1	8.9	8.7	8.5	8.3	8.1	7.9	7.7	7.6	7.4	7.2	7.1	40
35	9.2	9.0	8.8	8.6	8.3	8.1	7.9	7.7	7.6	7.4	7.2	7.1	6.9	6.8	6.6	6.5	35
30	8.4	8.1	7.9	7.7	7.5	7.3	7.2	7.0	6.8	6.7	6.5	6.4	6.2	6.1	6.0	5.9	30
25	7.5	7.3	7.1	6.9	6.7	6.6	6.4	6.2	6.1	6.0	5.8	5.7	5.6	5.4	5.3	5.2	25
20	6.5	6.3	6.2	6.0	5.9	5.7	5.6	5.5	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	20
15	5.5	5.4	5.2	5.1	5.0	4.9	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.9	15
10	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.1	10
5	3.0	2.9	2.9	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	5

## CLEAN WOOL REGAIN TABLE No. 3 (TO NEAREST 1/10 OF 1%)

ARRANGED FOR 10° INTERVALS OF TEMPERATURE FROM 100° TO 250° F.  
AND 5% INTERVALS FOR VALUES OF RELATIVE HUMIDITY ( $H=100\frac{H}{H_0}$  OR HOWEVER OBTAINED)  
CALCULATIONS FOR REGAINS (R) ARE BASED UPON THE FORMULA  $R = R_1 \sqrt{\frac{H}{H_0}}$   
WHERE FOR 70° F. AND  $H = 100\%$ ,  $K, R_1 = 3890$ .

THE PROBABLE ERROR IN THESE REGAIN FIGURES, THAT IS, FOR 110° F.  
AND ABOVE, IS NOT YET KNOWN TO THE AUTHOR AS THEY HAVE NOT BEEN  
EXPERIMENTALLY VERIFIED BY HIM.

THE KNOWN TENDENCY TO LOSE HYGROSCOPIC CAPACITY AT THE HIGHER  
TEMPERATURES WOULD IMPLY THAT THE ERROR IS ON THE PLUS SIDE AND MAY  
BE RELATIVELY LARGE.

NO RELIABLE DATA HAVE COME TO HIS ATTENTION.

RELATIVE HUMIDITY		HARTSHORNE'S 1921 TABLES - SERIES 3 - COTTON REGAINS														RELATIVE HUMIDITY	
100% = H		100°	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°	250°
100% = H		100°	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°	250°
100	19.5	19.2	18.9	18.5	18.2	17.9	17.6	17.3	17.1	16.8	16.5	16.3	16.1	15.8	15.6	15.4	100
95	15.3	15.0	14.7	14.5	14.3	14.0	13.8	13.6	13.4	13.2	13.0	12.8	12.6	12.4	12.2	12.0	95
90	13.5	13.2	13.0	12.8	12.6	12.4	12.2	12.0	11.8	11.6	11.4	11.2	11.1	10.9	10.8	10.6	90
85	12.1	11.9	11.7	11.5	11.3	11.1	10.9	10.8	10.6	10.4	10.3	10.1	10.0	9.8	9.7	9.5	85
80	11.0	10.8	10.6	10.4	10.3	10.1	9.9	9.8	9.6	9.5	9.3	9.2	9.0	8.9	8.8	8.7	80
75	10.0	9.8	9.7	9.5	9.3	9.2	9.0	8.9	8.7	8.6	8.5	8.4	8.2	8.1	8.0	7.9	75
70	9.1	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.9	7.7	7.7	7.6	7.5	7.4	7.3	70
65	8.3	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.2	7.1	7.1	6.9	6.8	6.7	6.6	65
60	7.6	7.4	7.3	7.2	7.1	7.0	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.1	6.0	60
55	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	55
50	6.3	6.2	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.1	5.1	5.0	50
45	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.8	4.7	4.6	4.6	4.5	45
40	5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.4	4.3	4.2	4.2	40
35	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.3	4.2	4.2	4.1	4.1	4.1	4.0	3.9	3.8	35
30	4.4	4.3	4.2	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.7	3.6	3.6	3.5	30
25	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.1	25
20	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.8	2.8	20
15	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	15
10	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	10
5	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.3	5

## COTTON REGAIN TABLE No. 3 (TO NEAREST 1/10 OF 1%)

ARRANGED FOR 10° INTERVALS OF TEMPERATURE FROM 100° TO 250° F.  
AND 5% INTERVALS FOR VALUES OF RELATIVE HUMIDITY (H=100% OR HOWEVER OBTAINED).  
CALCULATIONS FOR REGAINS (R) ARE BASED UPON THE FORMULA  $R = \frac{2.7}{T}$   
FOR R, AND T, AT  $t = 70^\circ \text{F}$ .

SEE REMARKS CONCERNING PROBABLE ERROR GIVEN ON CLEAN WOOL  
REGAIN TABLE No. 3.

RELATIVE HUMIDITY		HARTSHORNE'S 1921 TABLES-SERIES 3-DEWPOINT TEMPERATURE														RELATIVE HUMIDITY	
100% = H		100°	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°	250°
100	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	210.0	220.0	230.0	240.0	250.0	100
95	98.3	108.2	118.2	128.1	138.0	147.9	157.9	167.8	177.7	187.6	197.5	207.4	217.4	227.3	237.2	247.1	95
90	96.5	106.4	116.2	126.1	136.0	145.8	155.6	165.5	175.3	185.1	194.9	204.8	214.6	224.4	234.2	244.2	90
85	94.7	104.5	114.2	124.0	133.8	143.5	153.3	163.0	172.7	182.5	192.2	202.0	211.7	221.4	231.1	240.9	85
80	92.7	102.4	112.1	121.8	131.5	141.2	150.8	160.5	170.1	179.8	189.4	199.1	208.7	218.4	227.9	237.5	80
75	90.7	100.3	109.5	119.5	129.1	138.7	148.2	157.7	167.3	176.9	186.4	196.0	205.5	215.0	224.5	234.0	75
70	88.5	98.0	107.5	117.1	126.5	136.0	145.5	155.0	164.4	173.8	183.2	192.5	202.1	211.5	220.9	230.3	70
65	86.1	95.6	105.0	114.5	123.7	133.1	142.6	151.9	161.3	170.6	179.9	189.2	198.5	207.5	217.1	226.4	65
60	83.6	93.0	102.3	111.6	120.9	130.2	139.5	148.7	157.9	167.1	176.3	185.5	194.7	203.9	213.0	222.2	60
55	80.9	90.2	99.6	108.6	117.8	127.0	136.1	145.2	154.3	163.4	172.4	181.5	190.6	199.7	208.7	217.6	55
50	78.0	87.2	96.3	105.4	114.5	123.5	132.5	141.5	150.5	159.4	168.3	177.3	186.2	195.0	205.0	212.8	50
45	74.9	83.9	92.9	101.9	110.8	119.7	128.6	137.4	146.3	155.0	163.9	172.6	181.4	190.1	198.9	207.5	45
40	71.3	80.2	89.1	98.0	106.8	115.5	124.3	133.0	141.6	150.3	158.9	167.5	176.1	184.7	193.2	201.8	40
35	67.4	76.2	84.9	93.6	102.3	110.9	119.4	128.0	136.5	144.9	153.4	161.8	170.2	178.6	187.0	195.3	35
30	63.0	71.6	80.2	88.7	97.2	105.6	114.0	122.3	130.7	139.0	147.2	155.4	163.6	171.8	180.0	188.1	30
25	57.8	66.3	74.6	83.0	91.3	99.5	107.7	115.6	124.0	132.0	140.0	148.0	156.0	163.9	171.9	179.8	25
20	51.8	59.9	68.0	76.2	84.4	92.3	100.5	108.1	116.0	123.7	131.6	139.3	147.0	154.6	162.3	169.9	20
15	44.0	51.9	59.2	67.7	75.4	83.2	90.6	98.4	106.0	113.5	121.0	128.4	135.8	143.1	150.4	157.7	15
10	33.7	41.2	48.3	56.1	63.5	71.0	78.2	85.4	92.6	99.7	106.8	113.8	120.8	127.7	134.6	141.4	10
5	18.6	24.8	30.9	37.7	44.5	51.4	58.0	64.7	71.3	77.8	84.3	90.7	97.0	103.3	109.6	115.7	5

## DEWPOINT TEMPERATURES

AND CORRESPONDING RELATIVE HUMIDITIES ARRANGED  
10° APART FOR INITIAL TEMPERATURES 100° TO 250° F AND  
5° APART FOR VALUES OF H FROM THE EQUATION:  $100 \frac{E}{H} = H\%$   
WHERE E = SATURATED OR MAXIMUM VAPOR PRESSURE AT TEMPERATURE t  
AND G = MAXIMUM VAPOR PRESSURE CORRESPONDING TO THE DEWPOINT TEMPERATURE.  
(SEE REPORT NO. 235, U. S. WEATHER BUREAU)

RELATIVE HUMIDITY		HARTSHORNE'S 1921 TABLES - SERIES 3 - ABSOLUTE HUMIDITY																RELATIVE HUMIDITY	
100% = H		100°	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°	250°	100% = H	
100	50.1	37.9	29.0	22.4	17.5	13.8	11.0	8.9	7.2	5.8	4.8	4.0	3.3	2.8	2.3	2.0	100	100	100
95	52.7	39.2	30.5	23.6	18.5	14.6	11.6	9.3	7.5	6.2	5.1	4.2	3.5	2.9	2.5	2.1	95	95	95
90	55.7	42.1	32.2	24.9	19.5	15.4	12.3	9.8	8.0	6.5	5.3	4.4	3.7	3.1	2.6	2.2	90	90	90
85	59.0	44.6	34.1	26.4	20.6	16.3	13.0	10.4	8.4	6.9	5.6	4.7	3.9	3.3	2.7	2.3	85	85	85
80	62.6	47.4	36.3	28.1	21.9	17.3	13.9	11.1	9.0	7.3	6.0	5.0	4.1	3.5	2.9	2.5	80	80	80
75	66.8	50.6	38.7	29.9	23.4	18.5	14.7	11.8	9.6	7.8	6.4	5.3	4.4	3.7	3.1	2.6	75	75	75
70	71.6	54.2	41.4	32.1	25.1	19.8	15.8	12.7	10.2	8.3	6.9	5.7	4.7	4.0	3.3	2.8	70	70	70
65	77.1	58.4	44.6	34.5	27.0	21.3	17.0	13.6	11.0	9.0	7.4	6.1	5.1	4.3	3.6	3.0	65	65	65
60	83.5	63.2	48.4	37.4	29.2	23.1	18.4	14.8	11.9	9.7	8.0	6.6	5.5	4.6	3.9	3.3	60	60	60
55	91.1	69.0	52.8	40.8	31.9	25.2	20.1	16.1	13.0	10.6	8.7	7.2	6.0	5.0	4.2	3.6	55	55	55
50	100.3	75.9	58.0	44.9	35.1	27.7	22.1	17.7	14.3	11.7	9.6	7.9	6.4	5.5	4.7	3.9	50	50	50
45	111.4	84.3	64.5	49.9	39.0	30.6	24.5	19.7	15.9	13.0	10.7	8.8	7.3	6.2	5.2	4.4	45	45	45
40	125.3	94.8	72.5	56.1	43.9	34.6	27.6	22.1	17.9	14.6	12.0	9.9	8.3	6.9	5.8	4.9	40	40	40
35	143.2	108.4	82.9	64.1	50.1	39.5	31.5	25.3	20.5	16.7	13.7	11.3	9.4	7.9	6.7	5.6	35	35	35
30	167.0	126.4	96.7	74.8	58.5	46.1	36.8	29.5	23.9	19.5	16.0	13.2	11.0	9.2	7.8	6.6	30	30	30
25	200.5	151.7	116.1	89.9	70.2	55.4	44.1	35.4	28.7	23.4	19.2	15.9	13.2	11.1	9.3	7.9	25	25	25
20	250.6	189.6	145.1	112.2	87.7	69.2	55.1	44.3	35.8	29.2	24.0	19.9	16.5	13.9	11.7	9.9	20	20	20
15	334.1	252.9	193.4	149.6	117.0	92.3	73.5	59.0	47.8	39.0	32.0	26.5	22.0	18.5	15.5	13.2	15	15	15
10	501.1	379.3	290.1	224.4	175.4	138.4	110.3	88.6	71.6	58.4	48.0	39.7	33.1	27.7	23.3	19.7	10	10	10
5	1002.2	758.6	582.3	448.9	350.9	276.8	220.6	177.1	143.3	116.9	96.0	79.4	66.1	55.4	46.6	39.5	5	5	5
1	5011.4	3792.9	2901.4	2244.3	1754.3	1384.2	1102.9	885.7	716.4	584.4	480.0	397.1	330.7	277.0	233.1	197.4	1	1	1
H	NUMBER OF CUBIC FEET CONTAINING ONE POUND VAPOR AT 100% RELATIVE HUMIDITY																	H	H
100	350.8	265.5	203.1	157.1	122.8	96.9	77.20	62.00	50.15	40.91	33.60	27.80	23.15	19.39	16.32	13.82	100	100	100

## ABSOLUTE HUMIDITY TABLE NO. 3.

SHOWING NUMBER OF CUBIC FEET CONTAINING 1000 GRAINS (1/7 OF A POUND) OF VAPOR AT RELATIVE HUMIDITIES INDICATED (BASED ON DATA FROM MARKS AND DAVIS STEAM TABLES)  
A DESIRABLE ARRANGEMENT FOR COMPARING REGAIN FIGURES WITH COUNTS OF YARN OR WEIGHT OF FABRIC AS AFFECTED BY VOLUME OF AIR MOVEMENT.



## APPENDIX.

For the information of those interested, who may not have convenient access to the original papers referred to, or may not care to follow the demonstrations and accompanying data to be found therein, the following abridged statements and modified formulae are taken from the author's revision of 1917, which see for more complete explanations.

FORMULAE FOR OBTAINING  
RELATIVE HUMIDITY

(and barometric corrections when needed).

According to Prof. Ferrel's deductions

$$(1) e = e' - 0.000367 P (t-t') \left[ 1 + \frac{t'-32}{1571} \right] \text{ or more simply}$$

$$(2) e = e' - (t-t') [0.0108 + 0.000007t'] \frac{P}{30}$$

$$(3) H = 100 \frac{e}{E}$$

In these, all pressures being measured in inches,

P = height of barometer (all corrections applied)

t = temperature of dry bulb in degrees fah.

t' = temperature of wet bulb in degrees fah.

(both as shown on sling hygrometer or its equivalent)

e' = the saturated or maximum vapor pressure at t'

e = actual vapor pressure corresponding to observed t and t'

E = saturated or maximum vapor pressure at temperature t

H = relative Humidity.

The barometric correction curves shown in the author's Unit System Charts 1915 were calculated from that portion of

$$\text{formula (2), reading } (t-t') [0.0108 + 0.000007t'] \frac{P}{30}$$

(For elevations less than one thousand feet no barometric correction is considered necessary in ordinary mill practice.)

When the temperature of the *dewpoint* has been determined *directly* the corresponding maximum vapor pressure for that temperature is the same as the value "e" in above equations and by *definition* is then independent of barometric pressure. (See U. S. Weather Bureau Report No. 235, and Forest Service Bulletin No. 104, U. S. Dept. of Agriculture.)

The principles of these formulae were used in calculating the humidity relations in all three series of tables, but the *absolute* humidities given in the second and third series are based on data from Marks and Davis Steam Tables.

The number 5771.44 used in the following calculations is



deduced from a modified form of Prof. Marvin's for weight of a *cubic foot of saturated aqueous vapor* at different temperatures, reading

$$W = 11.7449 \frac{E}{1 + \frac{1}{491.4}(t-32)} \quad \text{or more simply}$$

$$W = 5771.44 \frac{E}{T}$$

#### SUMMARY OF THE LAWS OF REGAIN.

FIRST. The general law for cotton and worsted (clean wool), and probably for any other textile fiber, may be expressed by the formula

$$KRT^3 = H \times 5771.44 \times 10^8$$

in which H represents any given relative humidity expressed decimally: R the regain at any absolute temperature T; K is a variable coefficient depending upon H, R and T in such a way that for H = 1, or *saturation*, the product KRT<sup>3</sup> is at all temperatures a constant quantity represented by the number 5771.44 x 10<sup>8</sup>. In this, 5771.44 is the weight in grains of a cubic foot of aqueous vapor at any temperature multiplied by the corresponding absolute temperature in degrees fah. divided by the maximum elastic force of aqueous vapor at that temperature expressed in inches of mercury. In this expression, therefore, we are independent of tables for saturated aqueous vapor, either for unit of weight or elastic force.

SECOND. For any given temperature the relation of values of R to the variable K, for both worsted and cotton, is expressed by a hyperbolic equation, differing for each substance.

THIRD. For any other temperatures the law for worsted is: *For the same humidity the squares of the regains at different temperatures are to each other inversely as the cubes of the corresponding absolute temperatures.*

FOURTH. The law for cotton is: *For the same humidity the first powers of the regains at different temperatures are to each other inversely as the first powers of the corresponding absolute temperatures.*

No other substances have as yet been compared in this manner by the writer, but for such substances it is quite possible that all these relations, except those of the general formula, may be decidedly different.

To connect these laws by formulae with the calculations used in making the regain tables in Series 2 and 3, note that

KRT<sup>3</sup> being a constant quantity for all temperatures at same humidity

$KR = H \times 5771.44 \times 10^8 \div T^3$  is a definite quantity for any temperature for each per cent of humidity, and we can write for 70 degrees fah.  $T_1 = (459.4 \text{ deg.} + 70 \text{ degrees}) = 529.4 \text{ deg.}$  and for  $H = 1$  or 100%

$$K_1R_1 = \frac{5771.44}{(529.4)^3} \times 10^8 = 3890 \text{ and for}$$

any other temperature, as 100 deg. fah., where  $T = 559.4 \text{ deg.}$

$$KR = \frac{5771.44}{(559.4)^3} \times 10^8 = 3297$$

In the case of worsted (clean wool), since the special law in the third heading above is expressed by the ratios:

$$\frac{R^2}{R_1^2} = \frac{T_1^3}{T^3} \text{ and since } KRT^3 = K_1R_1T_1^3 \text{ we can also write}$$

$$\frac{KR}{K_1R_1} = \frac{T_1^3}{T^3} \text{ or } \frac{R^2}{R_1^2} = \frac{KR}{K_1R_1} \text{ and } R = R_1 \sqrt{\frac{KR}{K_1R_1}}$$

For example since at 70 deg. temperature and 100 per cent humidity  $R_1 = 32.50$ , we write the equation for 100 degrees

$$R = 32.50 \sqrt{\frac{3297}{3890}} = 32.50 \times 0.9206 = 29.92$$

and for 50 per cent humidity where  $R_1 = 12.97$  (to nearest 1/100%)

$$R = 12.97 \times 0.9206 = 11.94 \text{ (or } 11.9 \text{ to nearest } 1/10\%)^*$$

In the case of cotton, the special law is expressed by the equation of ratios:

$$\frac{R}{R_1} = \frac{T_1}{T} \text{ or } R = \frac{R_1 T_1}{T} \text{ for equal humidities.}$$

In this, for example, for 70 deg. and 100 deg. respectively, the ratio  $\frac{T_1}{T} = \frac{529.4}{559.4} = 0.9464$  and since at 70 degrees and 100 per cent humidity  $R_1 = 20.60$ , we can write for 100 degrees and same humidity

$$R = 20.60 \times 0.9464 = 19.50$$

and for 50 per cent humidity where at 70 degrees  $R_1 = 6.69$  for 100 deg.,  $R = 6.69 \times 0.9464 = 6.33$  (or 6.3 to nearest 1/10%).

The following tables are printed here by special request, as being needed to complete the subject.

\*In the 1911 and 1917 papers will be found tables for worsted and cotton regains for each per cent of relative humidity (from 1 to 100) calculated to the nearest 1/100 of one per cent.

HARTSHORNE'S 1921 TABLES-SERIES 1-Vp- MAXIMUM VAPOR PRESSURES.																	
t-t'	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	t-t'
0	0.2030	0.2470	0.2980	0.3600	0.4320	0.5170	0.6160	0.7320	0.8660	1.0220	1.2010	1.4080	1.6450	1.9160	2.2250	2.5760	0
1	.1840	.2259	.2759	.3359	.4058	.4876	.5838	.6957	.8267	.9776	1.1516	1.3526	1.5835	1.8475	2.1495	2.4914	1
2	.1649	.2059	.2540	.3117	.3797	.4596	.5525	.6614	.7874	.9333	1.1042	1.2992	1.5231	1.7800	2.0740	2.4079	2
3	.1463	.1858	.2321	.2886	.3535	.4314	.5213	.6272	.7491	.8901	1.0569	1.2448	1.4647	1.7116	2.0005	2.3254	3
4	.1273	.1668	.2117	.2655	.3284	.4032	.4911	.5950	.7118	.8501	1.0105	1.1954	1.4072	1.6501	1.9250	2.2458	4
5	0.1090	0.1478	0.1916	0.2424	0.3042	0.3761	0.4609	0.5697	0.6755	0.8094	0.9652	1.1440	1.3508	1.5957	1.8858	2.2163	5
6	.0910	.1282	.1706	.2205	.2801	.3499	.4317	.5276	.6333	.7701	.9209	1.0947	1.2955	1.5263	1.7900	2.0908	6
7	.0729	.1098	.1506	.1993	.2560	.3238	.4036	.4963	.6051	.7308	.8776	1.0473	1.2421	1.4658	1.7226	2.0164	7
8	.0551	.0918	.1306	.1772	.2330	.2977	.3754	.4651	.5708	.6926	.8353	1.0000	1.1897	1.4074	1.6572	1.9429	8
9	.0372	.0728	.1115	.1562	.2099	.2726	.3473	.4350	.5366	.6553	.7940	0.9537	1.1384	1.3501	1.5928	1.8714	9
10	0.0203	0.0529	0.0925	0.1362	0.1868	0.2485	0.3261	0.4208	0.5334	0.6619	0.8127	0.9864	1.1870	1.2937	1.5303	1.8010	10
11	.0034	.0360	.0736	.1152	.1648	.2244	.2940	.3765	.4713	.5829	.7136	.8601	1.0377	1.2383	1.4690	1.7326	11
12	.0180	.0546	.0952	.1438	.2004	.2679	.3475	.4401	.5487	.6743	.8200	.9904	1.1850	1.4086	1.6652	1.9598	12
13		.0367	.0752	.1218	.1773	.2419	.3194	.4090	.5145	.6360	.7786	.9431	1.1327	1.3502	1.5998	1.8814	13
14		.0178	.0563	.1008	.1543	.2168	.2913	.3788	.4803	.5988	.7374	.8969	1.0814	1.2929	1.5354	1.8130	14
15			.0373	0.0808	0.1313	0.1927	0.2642	0.3487	0.4472	0.5626	0.6941	0.8516	1.0301	1.2365	1.4730	1.7430	15
16			.0184	.0598	.1093	.1687	.2382	.3196	.4150	.5265	.6569	.8074	.9808	1.1812	1.4117	1.6716	16
17				.0399	.0883	.1447	.2121	.2915	.3839	.4923	.6177	.7641	.9335	1.1279	1.3513	1.6030	17
18				.0199	.0663	.1217	.1860	.2634	.3578	.4692	.5995	.7519	.9263	1.0756	1.2930	1.5437	18
19					.0453	.0987	.1610	.2354	.3227	.4240	.5424	.6807	.8400	1.0244	1.2357	1.4757	19
20					0.0254	0.0757	0.1370	0.2083	0.2926	0.3909	0.5062	0.6395	0.7948	0.9731	1.1794	1.4194	20
21					.0045	.1130	.1823	.2635	.3588	.4701	.6003	.7506	.9239	1.1241	1.3506	1.6030	21
22						.0328	.0890	.1562	.2355	.3277	.4359	.5612	.7074	.8766	1.0708	1.2908	22
23						.0108	.0660	.1302	.2074	.2966	.4018	.5230	.6652	.8294	1.0186	1.2366	23
24							.0451	.1052	.1794	.2666	.3677	.4859	.6240	.7832	0.9674	1.1814	24
25							0.0201	0.0612	0.1154	0.1824	0.2636	0.3346	0.4297	0.5429	0.7300	0.9161	25
26							.0573	.1264	.2075	.3026	.4136	.5437	.6930	.8669	1.0619	1.2854	26
27							.0333	.1004	.1794	.2715	.3795	.5046	.6507	.8197	1.0127	1.2357	27
28							.0104	.0744	.1514	.2404	.3455	.4665	.6085	.7725	0.9615	1.1725	28
29								.0454	.1234	.2104	.3114	.4294	.5674	.7264	0.9114	1.1264	29
30								.0295	0.0964	0.1804	0.2783	0.3953	0.5262	0.6812	0.8612	1.0612	30
31								.0705	.1514	.2463	.3572	.4871	.6371	.8071	0.9971	1.2071	31
32								.0445	.1232	.2153	.3232	.4480	.5939	.7639	0.9539	1.1639	32
33								.0186	.0954	.1843	.2891	.4100	.5518	.7118	0.8918	1.0918	33
34									.0675	.1543	.2551	.3729	.5107	.6729	0.8529	1.0529	34
35									0.0405	0.1243	0.2221	0.3368	0.4696	.6246	.8046	1.0046	35
36									.0146	.0953	.1901	.3008	.4306	.5806	.7506	0.9406	36
37										.0674	.1591	.2666	.3915	.5315	.6815	0.8515	37
38										.0394	.1281	.2320	.3534	.4934	.6534	0.8334	38
39										.0115	.0961	.1968	.3164	.4464	.5864	0.7464	39
40											0.0682	0.1658	0.2804	.4004	.5304	0.6804	40

SATURATED OR MAXIMUM VAPOR PRESSURES  
TO 4 PLACES OF DECIMALS

SHOWING VALUES OF "e" AS COMPUTED FOR  
OBTAINING THE RELATIVE HUMIDITIES BY THE  
EQUATION  $H=100\frac{e}{p}$  (BAROMETER AT 30") FOR EACH  
DEGREE DIFFERENCE (t-t') BETWEEN WET AND  
DRY BULB ON SLING HYGROMETERS OR THEIR  
EQUIVALENT, AS RECORDED IN CORRESPONDING  
RELATIVE HUMIDITY TABLE NO.1 SERIES.  
THESE VALUES OF "e" WERE ALSO USED IN PREPARING  
TABLE OF DEWPOINT TEMPERATURES SERIES 1-DP,  
BY INTERPOLATING A CORRESPONDING TEMPERATURE  
IN THE TABLES OF MAXIMUM VAPOR PRESSURES  
PUBLISHED BY THE U. S. WEATHER BUREAU,  
REPORT NO. 235.

SATURATED OR MAXIMUM VAPOR PRESSURES  
TO 4 PLACES OF DECIMALS

SHOWING VALUES OF "e" AS COMPUTED FOR OBTAINING THE RELATIVE HUMIDITIES BY THE EQUATION  $H=100\frac{e}{P}$  (BAROMETER AT 30") FOR EACH DEGREE DIFFERENCE (t-t') BETWEEN WET AND DRY BULB ON SLING HYGROMETERS OR THEIR EQUIVALENT, AS RECORDED IN CORRESPONDING RELATIVE HUMIDITY TABLE NO. 1, SERIES 1.

THESE VALUES OF "e" WERE ALSO USED IN PREPARING TABLE OF DEWPOINT TEMPERATURES, SERIES 1-Dp, BY INTERPOLATING A CORRESPONDING TEMPERATURE IN THE TABLES OF MAXIMUM VAPOR PRESSURE PUBLISHED BY THE U. S. WEATHER BUREAU, REPORT NO. 235.

HARTSHORNE'S 1921 TABLES-SERIES 1-D <sub>p</sub> -DEWPOINT TEMPERATURES.																	
t-t'	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	t-t'
0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0	105.0	110.0	0
1	32.6	37.6	42.6	47.6	52.6	57.6	62.6	67.6	72.6	77.6	82.6	87.6	92.6	97.6	102.6	107.6	1
2	30.1	35.1	40.1	45.1	50.1	55.1	60.1	65.1	70.1	75.1	80.1	85.1	90.1	95.1	100.1	105.1	2
3	27.6	32.6	37.6	42.6	47.6	52.6	57.6	62.6	67.6	72.6	77.6	82.6	87.6	92.6	97.6	102.6	3
4	24.7	29.7	34.7	39.7	44.7	49.7	54.7	59.7	64.7	69.7	74.7	79.7	84.7	89.7	94.7	99.7	4
5	21.2	26.2	31.2	36.2	41.2	46.2	51.2	56.2	61.2	66.2	71.2	76.2	81.2	86.2	91.2	96.2	5
6	17.2	22.2	27.2	32.2	37.2	42.2	47.2	52.2	57.2	62.2	67.2	72.2	77.2	82.2	87.2	92.2	6
7	12.8	17.8	22.8	27.8	32.8	37.8	42.8	47.8	52.8	57.8	62.8	67.8	72.8	77.8	82.8	87.8	7
8	7.4	12.4	17.4	22.4	27.4	32.4	37.4	42.4	47.4	52.4	57.4	62.4	67.4	72.4	77.4	82.4	8
9	-0.6	4.8	9.8	14.8	19.8	24.8	29.8	34.8	39.8	44.8	49.8	54.8	59.8	64.8	69.8	74.8	9
10	-11.6	6.9	11.9	16.9	21.9	26.9	31.9	36.9	41.9	46.9	51.9	56.9	61.9	66.9	71.9	76.9	10
11	-42.5	-1.2	13.0	22.4	30.1	37.6	44.6	51.2	57.4	63.4	69.3	74.9	80.5	85.9	91.3	96.7	11
12	-13.8	7.2	18.4	27.1	34.7	42.2	49.0	55.5	61.7	67.6	73.4	79.0	84.8	90.7	95.4	101.2	12
13	-0.6	13.5	23.6	31.7	39.5	46.8	53.5	59.9	65.9	71.8	77.6	83.2	88.7	94.1	99.5	104.9	13
14	-14.0	7.7	19.6	28.6	36.7	44.4	51.4	57.9	64.1	70.2	76.0	81.7	87.3	92.8	98.4	103.9	14
15	-0.5	14.9	25.2	33.7	41.8	49.1	56.0	62.4	68.5	74.5	80.2	85.9	91.4	97.0	102.6	108.2	15
16	-13.4	6.9	17.0	26.0	33.0	40.1	46.8	53.9	60.5	66.8	72.9	78.7	84.5	90.1	95.7	101.3	16
17		+0.8	16.8	23.6	30.6	37.1	43.4	49.4	55.6	61.7	67.6	73.4	79.0	84.8	90.6	96.4	17
18	-12.0	10.9	23.6	32.9	41.7	49.4	56.6	63.2	69.6	75.7	81.6	87.3	93.0	98.7	104.4	110.1	18
19		3.4	19.2	29.6	38.8	47.1	54.5	61.3	67.9	74.1	80.1	85.9	91.7	97.5	103.3	109.1	19
20	-1.5	13.6	26.1	35.6	44.5	52.3	59.4	66.1	72.4	78.5	84.4	90.1	95.8	101.5	107.2	112.9	20
21	-37.5	6.8	22.0	32.3	41.8	49.9	57.3	64.3	70.7	76.9	82.9	88.9	94.9	100.9	106.9	112.9	21
22		-2.8	17.0	28.9	38.8	47.5	55.2	62.3	69.0	75.3	81.4	87.4	93.4	99.4	105.4	111.4	22
23	-22.7	10.9	25.0	35.5	44.5	53.0	60.3	67.2	73.7	79.9	85.9	91.9	97.9	103.9	109.9	115.9	23
24		2.4	20.8	31.9	42.1	50.6	58.2	65.4	72.0	78.3	84.4	90.4	96.4	102.4	108.4	114.4	24
25	-11.8	15.0	28.3	38.9	48.0	56.1	63.4	70.2	76.7	82.8	88.9	94.9	100.9	106.9	112.9	118.9	25
26		8.1	24.3	35.6	45.4	53.8	61.4	68.4	75.0	81.1	87.1	93.1	99.1	105.1	111.1	117.1	26
27	-2.5	19.5	31.7	42.5	51.7	59.3	66.6	73.3	79.5	85.2	90.9	96.6	102.3	108.0	113.7	119.4	27
28	-23.3	13.2	28.2	39.3	48.5	57.1	64.6	71.6	78.2	84.3	90.0	95.7	101.4	107.1	112.8	118.5	28
29		5.1	23.9	35.9	46.1	54.8	62.6	69.8	76.5	82.7	88.9	95.1	101.3	107.5	113.7	119.9	29
30	-7.4	18.7	32.1	43.1	52.4	60.5	68.4	75.9	82.9	89.4	95.4	101.4	107.4	113.4	119.4	125.4	30
31		12.2	29.9	40.9	50.3	58.3	66.0	73.3	79.9	86.0	91.7	97.4	103.1	108.8	114.5	120.2	31
32		3.0	23.9	36.5	47.1	56.0	63.5	70.6	77.1	83.1	89.0	94.9	100.8	106.7	112.6	118.5	32
33	-13.2	16.5	32.6	44.2	53.5	61.8	69.8	77.6	85.1	92.4	99.4	106.3	113.2	120.1	127.0	133.9	33
34		11.3	28.6	40.9	51.0	59.9	67.6	75.1	82.1	88.6	94.6	100.6	106.6	112.6	118.6	124.6	34
35		+1.1	24.1	37.3	48.2	57.3	65.6	73.3	80.4	87.0	93.1	99.1	105.1	111.1	117.1	123.1	35
36		-17.5	18.4	33.4	45.2	54.9	63.4	71.3	78.7	85.7	92.3	98.4	104.5	110.6	116.7	122.8	36
37			11.5	29.3	42.1	52.3	61.5	69.6	77.1	84.1	90.6	96.7	102.8	108.9	115.0	121.1	37
38		+0.5	24.7	38.5	49.5	59.5	67.5	75.5	82.5	89.5	95.5	101.5	107.5	113.5	119.5	125.5	38
39		-21.5	19.0	34.5	46.5	56.5	64.5	72.5	79.5	86.5	92.5	98.5	104.5	110.5	116.5	122.5	39
40			11.5	30.2	43.3	53.3	62.3	70.3	77.3	84.3	90.3	96.3	102.3	108.3	114.3	120.3	40

DEWPOINT TEMPERATURES  
TO NEAREST 1/10 DEGREE

PREPARED TO CORRESPOND WITH RELATIVE HUMIDITY  
TABLE NO.1-SERIES 1, WHICH WAS CALCULATED FOR EACH  
DEGREE DIFFERENCE (t-t') BETWEEN WET AND DRY BULB  
ON SLING HYGROMETERS, OR THEIR EQUIVALENT.  
THE VAPOR PRESSURE e, AS FOUND FOR THE EQUATION  
FOR RELATIVE HUMIDITY, H=100% (BAROMETER AT 30")  
IS THE MAXIMUM VAPOR PRESSURE AT THE DEWPOINT  
WHEN "E" IS THE MAXIMUM FOR THE DRY BULB  
TEMPERATURE.  
THE DEWPOINT TEMPERATURES GIVEN WERE  
OBTAINED BY INTERPOLATION FROM THE TABLES OF  
MAXIMUM VAPOR PRESSURE AS PUBLISHED IN U.S.  
WEATHER BUREAU REPORT NO. 2, 3, 5.

100-31

DEWPOINT TEMPERATURES  
TO NEAREST 1/10 DEGREE

PREPARED TO CORRESPOND WITH RELATIVE HUMIDITY  
TABLE NO. 1-SERIES 1, WHICH WAS CALCULATED FOR EACH  
DEGREE DIFFERENCE (t-t') BETWEEN WET AND DRY BULB  
ON SLING HYGROMETERS OR THEIR EQUIVALENT.

THE VAPOR PRESSURE "e" AS FOUND FOR THE EQUATION  
FOR RELATIVE HUMIDITY  $H=100 \frac{e}{E}$  (BAROMETER AT 30")  
IS THE MAXIMUM VAPOR PRESSURE AT THE DEWPOINT  
WHEN "E" IS THE MAXIMUM FOR THE DRY BULB  
TEMPERATURE.

THE DEWPOINT TEMPERATURES GIVEN WERE  
OBTAINED BY INTERPOLATION FROM THE TABLES OF  
MAXIMUM VAPOR PRESSURE AS PUBLISHED IN U.S.  
WEATHER BUREAU REPORT NO. 235.

SENATE HEARINGS ON THE CAPPER FABRIC  
BRANDING BILL.ITS WEAKNESSES DISCLOSED BY TESTIMONY OF EXPERTS  
IN INDUSTRIES AFFECTED.

THE bill introduced into the Senate by Senator Capper of Kansas to compel the branding of wool fabrics and clothing containing wool with their fiber content was referred to the Senate Committee on Interstate Commerce. It in turn referred the bill to a sub-committee composed of Senators Watson, Indiana; Fernald, Maine; and Smith, South Carolina, for hearings. These hearings began June 1, and were continued through June 1, 2, 3, 7, and July 7 and 8.

Much new testimony was produced to show the way in which the bill, if enacted, would injuriously affect both the wool manufacturer and the maker of ready-made clothing, without in the least aiding the purchaser to buy either fabrics or clothing intelligently. The same unenlightened arguments advanced before the House Committee in 1920 were met and refuted, and many explanations of technical matters, clear to all acquainted with wool manufacture, had to be made to the members of the committee. Many of these have been eliminated from the testimony herewith reproduced, but the essential statements necessary for an understanding of the points made have been retained. The clear testimony of the witnesses opposing the bill shows how utterly futile the proposed law would be to aid uninformed purchasers, the class ostensibly in whose interests the bill is proposed for enactment, and what opportunities would be given by the law to foreign manufacturers to invade this market, and to dishonest manufacturers by evading its provisions to impose upon unsuspecting buyers, misled by the labels required by the law.

The sub-committee plans to have certain samples of cloth tested by chemists and microscopists in the Bureau of Standards and the Department of Agriculture to determine, if they can, which ones contain reworked wool and which contain wool never before used and the percentages of each. Upon this test,



the chairman of the sub-committee has announced, according to a newspaper statement, will depend the recommendation to be made by the smaller body to the full committee.

The testimony of Mr. John P. Wood, president of the National Association of Wool Manufacturers, one of those convincing statements, reduced somewhat in size to meet the requirements of our space, was as follows:

MR. WOOD. The mills with which I am personally associated make pure worsted goods in which there is no shoddy, reworked wool, or other substitutes for wool.

SENATOR WATSON. Do they make anything else?

MR. WOOD. No, sir; their raw material is not mere virgin wool, but is virgin wool of fine quality from which the shorter fibers of virgin wool which would not give strength to the fabric have been combed out.

This statement is not intended to imply any special or exclusive merit for these mills, for there are a great many American mills that use only the same character of raw material. I mention the fact only by way of refuting the implication so often made by the advocates of the bill under consideration that it is opposed only by shoddy manufacturers and rag pickers.

Of the large number of manufacturers using pure new virgin wool only, I know of but one company that approves the French-Capper bill, and its approval is inseparably associated with an advertising campaign erected upon its advocacy of the measure.

The others are opposed to the measure because they know that it will give to inferior virgin wool fabrics a legislative sanction that will cause the unskilled consumer to appraise their intrinsic material worth as equal to that of the better goods which bear the same required label. . . .

It will be helpful to an understanding of this subject and will save time in the end if I explain, or define these raw materials to which reference must be made. With the aid of a few samples this can be quickly done. The information may incidentally prove of interest in the consideration of other legislation concerning wool which is soon to come before you.

#### VIRGIN WOOL IS A NEW TERM ADOPTED BY THE PROPONENTS OF THIS MEASURE.

Virgin wool is a new term adopted by the proponents of this legislation to signify pure new wool unmixed with any wool fiber that has been previously manufactured, or with any other fiber or material, new or old.

Reworked wool and shoddy are, so far as concerns this subject, synonymous and interchangeable terms, applied to wool which has previously been manufactured, but which has again had its fibers disintegrated.

There are many stages in the conversion of raw wool into manufactured articles, and for the purposes of this bill it is necessary to



arbitrarily determine at what stage in the course of its progress from the sheep's back to the finished article, new wool must cease to be known as new and thereafter be classified as old. The authors of this bill fixed this point as just prior to the spinning of the yarn. . . .

Up to this stage of single spun yarn, the French-Capper bill classifies all of the fiber, including the by-products and waste, as virgin wool.

Once the fiber has been spun into this form it cannot, if thereafter separated into the integral fibers, be classed as virgin wool. It matters not whether the thread has ever been carried to completed manufacture or not, nor how new, pure, and unused the fiber itself may be. Just as your automobile becomes a second-hand one the moment you have taken it from the dealer, so do these fibers become second-hand the instant they pass from roving to yarn. And by itself there would be nothing to criticize in that distinction. The dividing line is probably as good as any that could be selected; and there would be no ground for complaint upon that score if the matter was not infinitely complicated, because on one side of the line there are so many worthless or exceedingly poor things entitled to the term "virgin wool," while on the other side there are as many of superior quality and value that must unjustly carry a name popularly associated with inferiority and worthlessness. . . .

The purport of the bill is to enable the purchaser of woolen goods and woolen garments to distinguish between superior and inferior qualities of such merchandise.

If such a law could accomplish that purpose, it would only be necessary to consider whether it would be worth the cost to the consumer. If the cost would not be excessive the enactment would be advisable without regard to the inconvenience or trouble that it might cause for manufacturers and merchants.

If, however, the consumer-purchaser would not be aided in distinguishing between better and poorer qualities, the statute books ought not to be encumbered with a useless law, even though it would be entirely harmless and would neither increase the cost of clothing nor complicate the processes of manufacture and distribution.

But if the enactment of a bill like this would actually facilitate deception as to quality, increase the price on woolen goods and garments, and add to the expenses of governmental administration; such enactment would be worse than negatively unwise, it would be unqualifiedly bad legislation.

#### THE QUALITY OF THE FABRIC IS A MATTER OF CONSTRUCTION.

If the quality of woolen products was determined by the raw material of which they are made, and if there was a well-defined line of demarcation between superior and inferior raw material, all virgin wool being upon the one side and all other materials on the other, there might be some utility in branding the products with a description of the raw material components. But neither of the premises is true, the quality of the finished product is a matter of construction. Good materials will not insure a strong and enduring building or bridge unless the design and the workmanship

are right. Some costly structures of reinforced concrete, and others of steel, have collapsed even before they were completed, while some of the most ancient structures in existence were built of adobe or other sun-baked clays.

The raw materials employed in the making of woolen goods do not differ in quality according as they are of new or reworked wool. Both classes vary by infinite gradations from very good to very poor, and of the innumerable qualities of new wool there are many sorts that are greatly inferior to many kinds of reworked wool.

So it is impossible by any mere enumeration of the components of a fabric to indicate its worthiness. The intrinsic worth of the components cannot in the slightest degree be expressed by the names of the components. A fabric of 100 per cent reworked wool may be infinitely superior in every desirable attribute and quality to another made of 100 per cent of new wool, because the reworked raw material of the one may be superior to the new wool of the other, or because the structural design or the workmanship of the one may be better than of the other. . . .

The bill would put in one group all new wool, the excellent, good, fair, poor, and worthless, and with these would be included all noils and card waste. Articles manufactured from any of these would be branded 100 per cent virgin wool, no matter how poor the raw material or how worthless the construction and workmanship.

Into the other group would be placed all garnetted new yarn, tailors' clips, broken knitted work, together with all the reworked wool. And all articles containing any part of these materials, however excellent the raw material or however good the method of construction and skill of workmanship, must be so designated as to promote doubt and suspicion, because the public doesn't have the technical knowledge to appraise the terms at their intrinsic value. . . .

#### WEARING QUALITY OF ARMY OVERCOATS CONTAINING SHODDY.

SENATOR WATSON. After we adjourned on Saturday I went to lunch where I met a number of Senators and I fell to discussing this measure. Among other Senators present was Senator Wadsworth, Chairman of the Committee on Military Affairs and a very able man. In discussing the matter he said that it was ascertained by actual experience and experimentation that the German overcoat, that is, the overcoat made by Germans for their soldiers, was the warmest of any of the overcoats furnished by the countries at war to their soldiers. And he said that out of their experience the conclusion was reached that the warmest overcoat made for their soldiers was made from goods consisting of 70 per cent virgin wool and 30 per cent shoddy, and that in the manufacture of the goods they had found they could not get the same degree of warmth from pure wool, that the shoddy gave additional warmth. Is that so or not so, according to your view?

MR. WOOD. Senator, I will help the opponents to an avoidance of an answer to that question by saying that he went a step too far by saying that it would be warmer.

SENATOR WATSON. I am just saying what was said, though.

MR. WOOD. But it is just as warm, and so durable that with the

hardest kind of wear in ordinary service our soldiers would not wear out an overcoat, not made of 70-30, but of 65-35, that is, 65 per cent of virgin wool and 35 per cent of reworked wool. The soldier would not wear one out in a three-year enlistment.

It fell to my lot to investigate that during the war for the Quartermaster General, and I visited nearly all the permanent camps and cantonments, and talked with the supply officers, with the officers in command of troops, and with the soldiers themselves, as to the length of time that various garments would last under conditions to determine what the rate of renewal should be. And for service prior to the war on the border, in actual field service, the estimate was that an overcoat should last for from 6 to 7 years. I have myself worn in military service an overcoat made with a large quantity of reworked wool.

SENATOR WATSON. Of what per cent?

MR. WOOD. I cannot tell you. I think it was 50 per cent. They changed it afterwards. They had it 35 per cent for a while, and afterwards, on account of the shortage of wool, the Government ordered that they should be made with 50 per cent of each. This was a later overcoat that I got, and I cannot tell you just what the proportions were. But I can say from my observations that it wore very much better than an officer's overcoat that I had previously had, made presumably of 100 per cent virgin wool, but which had a much more napped surface. I will refer to that later on as one of the evidences of trouble in textile fabrics, that the troubles of the public are very little with the raw materials, but are chiefly with other difficulties and faults than that of the component materials.

SENATOR WATSON. Well, I suppose that there would enter into that equation also the character of the shoddy that was used.

MR. WOOD. Oh, certainly, just the same as the character of the wool.

SENATOR WATSON. Yes; certainly.

MR. WOOD. Nobody would for a moment contend that the best shoddy was equal to the best wool. No question about that.

SENATOR FERNALD. I was just about to ask that question. No one would contend that the best shoddy was equal to the best wool?

MR. WOOD. Oh, no, no.

SENATOR WATSON. Now let me ask you this. In making it up, in manufacturing it, if you take pure wool, or what you call virgin wool, can you make a firmer garment or more durable garment by admixing with it shoddy of a certain per cent?

MR. WOOD. That question could not be answered in a general way. The fabrics are of such infinite variety in construction and design that the only answer I could give would be concerning a specific type of fabric. Now if the cloth was one that was not milled—one for instance, that you could hold up to the light and see the light through the interstices—then generally speaking, weight for weight the same number of threads per square inch both in the warp and in the weft, the fabric that was composed of the best virgin wool would be stronger than the fabric that had an admixture of the best virgin wool and the best reworked wool. Now that is the nearest comprehensive answer I can make.

But the moment you depart from the best in the one case and retain the best in the other, or the moment you change the character of the construction so that you are dependent not merely upon the interlacing of the yarns, but upon the interlacing of the fibers themselves, then it might easily be that you could get a fabric composed of part best virgin wool, part best shoddy, that would be stronger than another similar fabric not so milled and fullled, composed exclusively of virgin wool. The question is much too broad to give any single answer to.

#### THE WORTHINESS OF ANY OTHER FIBER IS NOT CONSIDERED.

There is no provision in this bill for taking into account the worthiness of any other fiber than wool. This is a cloth which is made containing nothing but virgin wool (exhibiting sample of cloth to the committee) except a very small quantity of very fine silk. These are samples that were made for use entirely in another connection, some years ago, and consequently the prices which I have are not relative to-day at all. The purpose of cloth of this kind is to give a certain style effect. The yarn is woven in its uncolored state like this (exhibiting sample of yarn) so that when the cloth is finished it is all white. Around some of the threads there is twisted a fine silk thread. Then the entire finished cloth or woven cloth is dyed with a dye that will color the wool, but will not color the silk. That gives the background of black with the little fine particles of undyed white silk standing out, which gives it this little mixture effect.

I will show you another sample (exhibiting sample to the committee). The sample I have given you is one in which you find cotton thread is used instead of silk. In the other silk thread is used.

Now, with regard to the one containing the silk thread. What I want to bring out is that we make a cloth of this kind, with the silk in it, the silk costing us \$10 a pound. Now, that is all virgin wool except the very fine specks which you see through there, which are little specks of silk, and that silk costs upward of \$10 a pound. . . .

Now, this is a sample of silk noils, worth 25 cents a pound, (exhibiting sample to the committee). That is also pure silk. Silk noils are a substitute for wool; sometimes cheaper than good grades of shoddy, the pure silk. That can be used in the same way that shoddy is, as a cheapener for woolen fabric. Thirty per cent of that could be put into a cloth with 70 per cent of virgin wool. Now, that cloth would be labeled 70 per cent virgin wool and 30 per cent silk, and sold at a price the third part of the one which I just showed you containing the fine silk threads, which cloth would be, say, 99 per cent virgin wool and slightly less than 1 per cent of silk.

Now, gentlemen, that is one of the many reasons why I, as a manufacturer of virgin wool fabrics, object to this bill. The public has certain prejudices favorable to some articles and prejudices unfavorable to others. There is a prejudice in favor of silk. The implication carried by a label saying 30 per cent silk as against another saying 1 per cent silk would be that this is a very good fabric, the one containing the 30 per cent of silk. And yet that is



only used to reduce the cost of the material, mixed in with the wool. . . .

#### DIFFICULT FOR LAY MIND TO GRASP INTRICACIES OF MANUFACTURE.

SENATOR WATSON. Of course it is a little difficult for the lay mind to grasp at once all the intricacies of manufacture.

MR. WOOD. Yes; but just think how difficult it is for the consumer to form any conclusion from a mere label of 70 per cent virgin wool and 30 per cent silk, or 70 per cent virgin wool and 30 per cent reworked wool. That is our whole contention, that that information conveys absolutely nothing of any value to the consumer.

SENATOR WATSON. Well, it would be difficult for him to grasp the idea of a tag which said 100 per cent virgin wool.

MR. WOOD. Yes, certainly, because 100 per cent virgin wool would mean to him, by the very fact that Congress enacts this law, that that constitutes something more worthy than anything which does not have 100 per cent virgin wool, and yet it may be wool of a very inferior quality, or a considerable part of it may be wool of a very inferior quality. There might be of the total weight of the fabric easily 30 per cent of noils. There might be possibly 40 per cent of noils and some of these other things which I have shown you. The fabric might be inherently weak. It would be just as attractive as a fabric made of virgin wool. From the fact that it is labeled virgin wool, the customer has a right to expect that it has some superior quality, or Congress would not have made this law, and he buys it on the face of that, and yet that fabric, with 30 per cent or 35 per cent of noils, may be very much less durable and less strong than another fabric composed of 70 per cent or 65 per cent of virgin wool and 30 per cent or 35 per cent of the best shoddy. Of that there is no question.

The manufacturers of goods for which reworked wool is required as a component, cannot withhold the fact from their customers, for these buyers are necessarily skilled experts entirely competent to determine the intrinsic worth of the fabrics they purchase. And in the long interval between the purchase and delivery they have and exercise ample opportunity to subject the samples to such test as they may care to apply.

The bearing of that is this, that it has been asserted over and over again by witnesses for this bill, that manufacturers sell their goods composed of shoddy at the same price that they sell similar fabrics made of virgin wool. The manufacturers sell their goods at wholesale. Their customers are experts. It is perfectly absurd to suppose that any expert buyer in a wholesale way, whose business depends on his skill in judging and selecting his fabrics, would pay as much for unworthy fabrics as he would for worthy ones. . . .

#### IMPOSSIBLE TO TELL ACCURATELY BY TESTS PROPORTION OF COMPONENT MATERIALS.

SENATOR WATSON. Can they determine from that whether it is virgin wool or shoddy?

MR. WOOD. No; No.

SENATOR WATSON. Can they determine by this stretching process whether it is virgin wool or shoddy?

MR. WOOD. No.

SENATOR WATSON. How do you determine whether it is virgin wool or shoddy?

MR. WOOD. The only possible way is to subject the fabric to microscopic examination by disintegrating the cloth first, and then taking each thread, or enough threads for the purpose, and making the microscopic examination. They could do it with probably three or four square inches of fabric. They would unravel those threads carefully and separate all those fibers out.

SENATOR WATSON. They cannot determine it by a chemical test, can they?

MR. WOOD. No.

SENATOR WATSON. Because wool is wool?

MR. WOOD. Because wool is wool, and subject to the same reaction and the same solvents, whether it is new or old. They can distinguish between any vegetable or animal fiber by a chemical test.

SENATOR WATSON. Well, when they come to tearing it to pieces then can they tell relatively whether it has been a high-grade quality of shoddy or a low-grade?

MR. WOOD. They can tell only as to its fineness. When they have separated all these fibers and examined them under the magnifying glass or microscope they can see whether the fiber was fine, whether it came originally from fine wool sheep, or whether it came originally from coarse wool sheep, but they cannot say any more than that. They cannot determine its other valuable or less valuable qualities as a fiber for manufacturing.

SENATOR WATSON. Then that is just as far as they can go with the test?

MR. WOOD. Absolutely. I might say in connection with that, that a year ago when this subject was under consideration samples were exhibited to an expert microscopic analyst to make a determination. I don't know whether this is proper to put in, because I cannot give you the original evidence, but this microscopical expert asked to know what the components were, for his guidance, and was told that that would not be quite fair; that it would not enable a determination of his skill. So he proceeded and made the analysis and made the report. A comparison of his expert microscopic examination with the actual blending formula was made, and his report was in most cases simply absurd. It bore no relation to facts. The proportion of virgin wool in some cases was stated as reworked wool, and in some cases reworked wool was stated as virgin wool.

#### OFFER TO HAVE CHEMISTS AND MICROSCOPISTS TEST FABRICS.

And we shall be very glad to give a collection of samples to your committee, without any information attached thereto as to the components, or with a specification under seal and placed in your charge, you to send them to the Bureau of Standards or the Chemical Department of the Bureau of Agriculture, and have their experts make a careful microscopic and chemical analysis and report back



to you the components, and when you receive that you will still have in your possession the actual information as to the original blends, and you will see how they come out in their examination. We shall be glad to furnish a range of samples containing different proportions of new and reworked wool and of cotton and of silk and of silk noils, such as I have shown you here.

SENATOR WATSON. That is very interesting.

MR. WOOD. Now, if either of those bureaux can come within even an approximate accuracy in their estimate of the compositions, the cause for the proponents will have been very greatly helped, and our cause will be very greatly weakened, and we offer that test. . . .

SENATOR FERNALD. Mr. Wood, could the man who makes the blend in your factory, if the goods were taken from him for a year and then given to him again, retest those goods and determine himself again the percentage?

MR. WOOD. No, sir; over and over again mills making this kind of goods have made tests of this kind, and they have failed. The mills are in very keen and active competition with each other, and it is no uncommon thing in the trade for the selling department of one mill to find that some other mill has a cloth that is selling very, very successfully. They want to know what it is composed of, so they get a sample of it in the open market, and take it back to the mill and have it carefully analyzed to determine what it is; and in the case of these goods, which are composed of partly new and partly of old wool, the guesses which the most expert men whom the mills have make are usually wide of the mark, and sometimes ludicrously wide.

It does not make any difference how skillful we are, all we can do is to separate those yarns into their component fibers, look at them under the microscope, and make our best guess as to what those fibers are.

Now, you have got a great many fibers there. You are only examining the billionth part of the larger piece of cloth which would be offered in commerce. It is an absurdly small quantity. And we pick those out and separate the fibers, and we think maybe this one is wool and maybe this one is reworked wool, and so on, and then we count up the number of fibers of each, and then we say there is so much of each out of 100 per cent, and that is our guess.

There are experts who have been doing that all of their lives, and we can bring them here and they will tell you that the best they can do is to make a crude guess. And they are men who are doing this thing and doing it as a business. A man who undertakes to do that thing in a laboratory, with nothing but a laboratory experience, could not begin to come as close to it as a practical man, who is trying to do well on the selling market and prepare something that he will share in the success of.

THE FOREIGN MANUFACTURER WOULD BE GREATLY HELPED BY THE  
PROPOSED LAW.

SENATOR WATSON. Now, talking about the practical side of the matter. This bill provides that any foreign manufacturer who de-

sires to sell in America shall obtain a permit from the Secretary of Commerce before his goods shall be permitted to come into the United States. You understand that?

MR. WOOD. That is foreign goods?

SENATOR WATSON. Yes; foreign goods. Now the foreigner might put into a piece of cloth, which might be made into a suit of clothes according to your testimony, 70 per cent of virgin wool and 30 per cent of shoddy, and when that came over into this country there would be practically no way of telling that, would there?

MR. WOOD. No, sir; there would not be any way of telling that with any degree of accuracy.

SENATOR WATSON. Yes. Now, you manufacture in Philadelphia. There would be an expert going through your mill from the United States Government. We would have no authority, of course, to send experts through any foreign mill.

MR. WOOD. Yes; that is true. We would have no authority to send experts through foreign mills.

SENATOR WATSON. And you right there in your factory, if you are making a piece of cloth in your factory, know what is going into it, do you not, whether it is virgin wool or shoddy?

MR. WOOD. Yes; surely.

SENATOR WATSON. Or what per cent of virgin wool there is in the cloth, and what per cent of shoddy there is in that cloth?

MR. WOOD. Yes.

SENATOR WATSON. Therefore you would be compelled under oath to make a statement as to the component parts of that piece of cloth. Might you then come into competition in the open market with goods of the same character from abroad with a tag attached to the piece of goods that did not correctly represent the character of the goods?

MR. WOOD. That is so true, Senator Watson, that I have already asked Mr. Gifford, who makes some of the finest goods made in the world, and who comes directly in competition with foreign fabric, to explain to you that very fact.

SENATOR WATSON. In other words, what I am trying to get at is this: If there be no tag—and that is one of the things we are inquiring about—if there be no tag by which the quality or the quantity of the component parts of the goods can be determined, how is this law to be administered?

MR. WOOD. There is no way that I can see, so far as the foreigner is concerned. So far as the American manufacturer is concerned the Government can put inspectors in the mill, as it did during the war, and the inspectors can actually see the blends made. And the inspectors can see that the labels correspond with their own observation of manufacture, there is no doubt about that. It will cost a very vast sum. And that will be the eventual result. That is, briefly, what some of the members of the House committee developed in the testimony last year, that whenever you impose upon a Government bureau a duty to make certain kinds of inspections, that it becomes an inevitable obligation upon the part of that bureau, and without any regard to magnifying their own laws, there is only one way to proceed, and that is to discharge their duty.

Now, in order to make sure that the manufacturers will put

the labels upon those goods, without chance of error, the only way is to examine the goods in the process of manufacture, as the War Department did during the war, and ascertain what the blends are.

FOREIGN MANUFACTURER WOULD ESCAPE PUNISHMENT FOR  
MISBRANDING.

Now, with the foreign manufacturer you can reach the American agent through whom he sells, but the American agent protects himself under the provision of the law, by getting a written statement from the manufacturer as to what the components are. And he is released right away. He says, "I am selling these goods in good faith. I have procured a written statement from the manufacturer which says that these are the components of these goods."

SENATOR WATSON. Well, would there be anything about a piece of cloth or a suit of clothes that the importer of a foreign product would receive that would lead you, as we say in law, conclusively to presume that he did know what was in it?

MR. WOOD. No, sir; absolutely not. He only knows the merit of the cloth as a piece of merchandise to sell, without any knowledge of its component or constituent parts, and gentlemen there who are engaged in the selling of such merchandise in the United States will tell you that in general the man who sells the merchandise does not concern himself with the component parts. The material is not the important thing. The style and feel and the handle and the strength and the durability of the fabric are the important things, and if you get strength, durability, style, finish, general handle of the cloth that is satisfactory to the buyer, the buyer does not care what it is made of. He is after the results, not after a theory as to what will constitute the right things. . . .

But on the point that you make, the American handler of the goods could have no knowledge of his own. He would naturally disclaim knowledge. He protects himself by the written statement of the foreign manufacturer. If that written statement is at variance with the facts there is no way in which the United States can enforce by a penalty the provisions of the act against a foreigner over whom they have no jurisdiction. There is no way by which that can be accomplished that I know of.

SENATOR WATSON. There is no way, of course, if there be no test by which you can tell whether it is a virgin wool or shoddy.

MR. WOOD. There is no such test. But even apart from that, suppose the Bureau of Standards makes an examination and says, "This cloth, which is branded 70 per cent virgin wool and 30 per cent shoddy, contains only 60 per cent virgin wool and 40 per cent shoddy"; suppose they are willing to certify to that. Now, where are you going to get the maker? You go first of all to the man who sold the goods in this country, the American house, and he says, "Here is my written statement from the manufacturer in Bradford, England, that it was 70 per cent of virgin wool and 30 per cent of shoddy." "Well," the Government says, "here is the statement of the Bureau of Standards that it is 60 per cent virgin wool and 40 per cent shoddy." "Well," he says, "the law exonerates me en-

tirely if I get a statement from the manufacturer as to its component parts."

What are you going to do about it? You cannot go over to Bradford and get the manufacturer.

SENATOR WATSON. No, the only thing they could possibly do, if they accept the analysis of the Bureau of Standards, would be to exclude it from this country.

MR. WOOD. Well, how are you going to exclude it? It might come through any number of intermediate hands. You can exclude that product so far as it may be sold by one particular man, but you cannot identify that product that is sold by any one of scores of other dealers.

#### ASSERTIONS ABOUT INCREASED USE OF SHODDY WITHOUT SIGNIFICANCE.

Statistics have been presented here to fortify the assertion that there is a tendency toward a greatly increased use of shoddy in woolen clothing sold in the United States. These figures are entirely without significance because of the changing conditions under which the business is done and the absence of information regarding the components of the quantities reported in various years. Formerly, the preparation of reworked wool in the mills in which the stock was employed, was for manufacture into yarns or goods, and a relatively small quantity was sold and bought as an article of commerce.

Gradually the work of preparing the stock for the mills developed into a separate business, those specializing in it being able to do the work for many mills more economically and more uniformly than each could for itself the quantities it alone needed. With the segregation of the business the statistics relating to it have become more complete. The shoddy of commerce as blended ready for the use of the mills may often contain ingredients that under the pending bill would be classed as virgin wool. For these reasons, as also because of the necessities of the war, which are fully explained in the report quoted—that is the report of the Federal Trade Commission—the statistics of total sales of shoddy warrant no inferences of an increasing use of reworked wool in civilian clothing.

There are, however, quite conclusive indications of a relative decrease in the use of reworked wool in the United States.

SENATOR WATSON. Now why do you say that, Mr. Wood?

MR. WOOD. I am going to try to show it to you.

Since the source is rags and clips, the domestic proportion of clips and rags being necessarily proportionate to the consumption of clothing, it follows that any material increase in consumption would mean an increase in imports of rags and clips, and that any decrease in importation or increase in exportation of rags and clips would mean a decrease in their domestic use. Unlike agricultural crops, there is no other way in which increased domestic use can be provided for except by either increasing imports or decreasing exports. Now the facts are that at one time we exported no woolen rags and imported very large quantities, whereas in

recent years very great quantities have been exported and little or none suitable for fabric manufacture have been imported.

Some rags have been imported for paper and felt manufacture, but not for fabric manufacture. I do not think this aspect of the matter is of particular importance, however, for whether much or little is used it is the economic advantage of the country that they be used.

I want to call the attention of the committee to the fact that the statistics as to the production of shoddy in separate shoddy mills cannot justify any inference as to an increased use of shoddy in the clothing of the people. . . .

MR. WOOD. Woolen underwear is almost exclusively made of mixtures of wool and cotton.

#### NO ANALOGY BETWEEN BILL AND PURE-FOOD LAWS.

Reference has frequently been made to the analogy between the pending measure and the pure-food laws. But there are very important differences. The pure-food laws are chiefly concerned with the prevention of mixing with or substituting for food products substances which are either harmful or, if not actually deleterious, are without food value. This bill is aimed at materials which have useful clothing value and which are not deleterious to health.

In the pure-food law there is not imposed the necessity for applying to good and useful materials a name which, by reason of long use as a term of contempt applied to many things other than textiles, has become a synonym for unworthiness.

SENATOR WATSON. Now, before you go into the next point, Mr. Wood, let me ask you this general question that is on my mind. You say you manufacture worsteds altogether?

MR. WOOD. Yes.

SENATOR WATSON. And they are made of virgin wool altogether?

MR. WOOD. Yes.

SENATOR WATSON. And no shoddy?

MR. WOOD. Yes; that is right.

SENATOR WATSON. What objections have you to putting a tag on that to that effect?

MR. WOOD. I am coming to that. I will show you one objection. I showed you one in connection with these silk noils—that a man can sell you a very cheap fabric and say that he is giving you 30 per cent silk and 70 per cent wool, and that fabric is cheaper than mine which has only 1 per cent of silk in it. He is selling that fabric, which is cheap as against a very superior fabric of mine which has only 1 per cent of silk in it, and by reason of that labeling required by law, the buyer thinks he is getting greater value in those cheaper goods.

SENATOR WATSON. In the 30 per cent silk?

MR. WOOD. Yes.

The cost of legislation of this kind will of course be an expense to the public. There will be the actual expense of applying the branding, and an increase in the unit allocation of overhead, due to the slowing up of outturn; and increase in the price of wool,



if the measure accomplishes the hope and expectation of its sponsors; all of which will necessarily enhance the price of the products.

In addition to these direct costs to the consumer, the public who are the consumers, must pay in taxes the Government's expense for administration and inspection, which members of the House committee at the hearing last year, estimated would reach a great sum.

This large aggregate cost, serious and objectionable as it would be, might be justified if the public received any tangible benefit. But would be wholly unwarranted if, as we know, the actual result would be to mislead the public by placing a false emphasis upon the significance of the term "virgin wool."

#### THE "RIGHT TO KNOW" INCLUDES MANY THINGS.

An analysis of all the statements that have been made by witnesses in support of the bill shows that they comprise four basic contentions:

*First*, that the purchaser has the right to know of what materials the article offered for sale is composed.

*Second*, that goods containing reworked wool are sold for the same price as goods otherwise of like kind and quality composed entirely of virgin wool, the manufacturer profiting by the difference in cost of the cheaper raw material.

*Third*, that the fault of goods and garments which give unsatisfactory wear is in the presence of shoddy.

*Fourth*, that the branding will, because of a belief in the superior merit of virgin wool, create a larger demand for virgin wool to the advantage of the growers of wool.

Let us briefly examine these basic assertions which, in varying form of statement, constitute the entire argument for compulsory branding.

No one will question the right of a buyer to know of what the article is made that is submitted for his purchase. He has also the right to know many other facts of even greater importance in the determination of its worth and durability. In the case of a woollen garment he has the right to know whether the goods contain noils; also the quality of the fiber of the wool, upon the length and strength of which depends the durability of the cloth much more than upon whether it is or is not wholly of virgin wool; that is, he has the right to know in a virgin-wool fabric what proportion is of these short noils; he has the right to know whether the threads are single or two-ply, a very important factor in durability.

There is a pure worsted fabric known as a shepherd check (exhibiting sample to the committee). That means the style of design. That is made of nothing but virgin wool from which these noils have been taken out.

This is a sample of an identical weight (exhibiting sample to the committee) made by a distinguished competitor of mine, who is in the room here, and for whom I have very great respect, which he can sell for probably 25 cents a yard less than I can sell mine for. I will venture to say that none of you will be able to dis-



cover the difference between those two samples. They are both of virgin wool, 100 per cent virgin wool.

SENATOR WATSON. I would not know the difference. Tell us what the difference is.

MR. WOOD. The difference is that in mine the warp is two-ply and the weft is two-ply, and in his the warp is two-ply and the weft is single yarn. The weft way of my cloth is very much stronger. His is a perfectly good and useful cloth, as to price, but it is worth just as much less as the difference in strength transversely.

Now, I ought to come down here and weep a little bit on the shoulder of Congress and ask that they provide in the labeling bill that every manufacturer must state whether his fabric is made of two-ply yarn or of one-ply yarn. I have just as great a grievance against the manufacturer who makes a one-ply yarn against my two-ply yarn as the wool grower has against the man who uses shoddy.

SENATOR WATSON. How much does he sell his for? For the same price that you sell yours?

MR. WOOD. No; he sells his for 25 cents less. Of course no manufacturer can sell a fabric which it takes appreciably less to make for the same price that a manufacturer can sell a fabric of higher quality for, in spite of everything to the contrary that has been said on the subject.

SENATOR FERNALD. The buyer who buys those different cloths can tell the difference?

MR. WOOD. The expert buyer must know the difference. For one thing, he would test it in his testing machine for strength. Another thing, he would unravel them and see whether they are single or double.

SENATOR FERNALD. So there is no imposition on him?

MR. WOOD. No; there is no imposition on him. But when that is made up into a suit of clothing and it is offered to you, you can not tell.

SENATOR WATSON. But yet they are both made of 100 per cent of wool.

MR. WOOD. Yes, sir; both of those samples are made of fine wool, 100 per cent wool, better than the mere virgin wool, because all the noils are taken out. Well, say that some of our raw material is virgin wool, some of those people who advocate the bill keep all their noils in the wool.

SENATOR WATSON. Now, do they mean by virgin wool, that the noils are not taken out?

MR. WOOD. Yes; they mean by virgin wool the wool just as it is scoured of the dirt, with both the long fibers and the noils.

SENATOR WATSON. Yes.

MR. WOOD. Their stuff has got the short stock in it. The worsted manufacturer has the short stock taken out.

#### AN ILLIMITABLE FIELD OF LEGISLATION WOULD BE OPENED.

It is also the right of the buyer to know whether there are the proper number of threads to the square inch; if not, the cloth will give way at the seams. A very important fault, because the

cloth is not closely woven enough for that particular type of fabric. He also has the right to know whether the cloth has been properly milled and shrunk and has not been so stretched in tentering that when exposed to dampness it will shrink in size and go out of shape.

He also has the right to know whether the dyes are fast to sunlight, to rain, and perspiration. He has the right to know whether the interlining is of genuine or of imitation haircloth. He has the right to know whether the canvas—so-called canvas—is made of linen or jute or cotton. Whether the linings are of cotton, mohair, silk, or imitation silk. These, and many other factors, are more important in the determination of value and durability than a specification of virgin wool without explanation of the kind of virgin wool.

Equally, too, the buyer has the right to know the particulars about all other things he buys; the components of his tools, whether or not there is scrap iron in the hardware, whether his mahogany desk is made of real mahogany or what is commonly called mahogany; what his shoes are composed of besides leather; how much rubber is in his overshoes; whether the spokes of his automobile are hickory, oak, or pine; what is in linen paper, besides linen.

Why, the field is illimitable, and if it is the duty of Congress to enact laws that will automatically inform him of everything he has the right to know, Congress can never discharge that duty.

The right to knowledge is one thing. The manner of its acquisition is another. The latter must chiefly depend upon the efforts of the individual seeker of knowledge.

The claim that manufacturers sell goods made wholly or in part of reworked wool for the same price as goods of the identical kind, construction, and finish made wholly of new wool hardly needs serious consideration. It refutes itself by its impossibility. If it were true the profit in the manufacture of such goods would be so great that there would be no pecuniary inducement to make any goods of virgin wool.

You will realize that if goods made of shoddy, cheap, worthless things, could be sold for the same price as goods 100 per cent virgin wool, goods such as I make, it would be folly for me to go on making them of the kind that I do make. The pure worsted industry would go out of existence instead of having in the last fifty years grown from nothing to its present vast proportions, producing the larger part of the suiting materials now in use, and exceeding in value of its output the carded wool business, the older branch.

#### DISTINCTION BETWEEN WOOLEN AND WORSTED INDUSTRIES.

The wool manufacturing industry is broadly divided into two great branches, according to the system or method of manufacture. The older form is known as the carding and the other as the worsted branch. Time will not permit me to describe in detail the differences between them. The primary distinction is in the process of making yarns. There are also fundamental differences in weav-

ing, but in the latter the distinctions are not so complete. It is in the yarns made by the carding process that reworked wools are used. In worsted yarns it can be very positively stated no shoddy is employed.

SENATOR WATSON. Now, let me ask you right there why you cannot employ shoddy? Why?

MR. WOOD. Why we cannot use it in worsted yarn?

SENATOR WATSON. Yes.

MR. WOOD. Because it is too unsuited for the combing machine. There would be too much of it wasted out by the same mechanical methods that take out the noils.

SENATOR WATSON. But that can be used in the carding machine?

MR. WOOD. Yes; the carding machine can use a shorter fiber.

SENATOR WATSON. Yes; I understand.

MR. WOOD. Shoddy cannot be used in the manufacture of worsted yarns for the same reason that the various wool noils cannot be used.

Prior to 1860 we had no worsted industry, the woolen manufacture of the country was exclusively by the carding process, the one that can use shoddy. Since 1860 the entire worsted industry of the country in its present magnitude has been created. Partly as new installation, partly by conversion of old mills into worsted mills, by the substitution of worsted machinery for woolen. This would have been altogether impossible if the manufacturers of shoddy goods could sell their fabrics for the price of those like kinds made of new wool. In the same period there has been a progressive decline in the relative production of many kinds of goods made by the old carded process. The change has been somewhat analogous to the growth of the steel industry at the expense of iron. There are some purposes for which the carded fabrics still have a preference, just as some articles are still made of iron, but a great portion of the carded goods formerly made have been as completely superseded by worsted as most of the things formerly made of iron have been by steel products. . . .

The third allegation is that the fault with poorly wearing goods is the presence of shoddy. Those who say so have produced no evidence whatever; no garments that have worn satisfactorily have been shown so that we might ascertain the nature of the defects.

I feel that if this was the common fault of clothing—the presence of unrevealed shoddy—that the proponents of this bill would have been able to bring many garments here to show how badly they had been worn, and then we could examine them and tell you about them, either admit that that was because they were made of shoddy, or we could show you what the fault was, if it was not because of the presence of shoddy. No such examples have been adduced at all.

I have from time to time been asked to serve as arbitrator in trade commercial disputes concerning unsatisfactory goods, and in the course of many years have had to review a large number of such cases of controversy over defective goods. In none of these cases has the fault been due to the use of reworked wool. They have all been faults of structure, or arising from chemical action on sound new fibers, or due to bad dyeing, and other causes in no way involving the merits of the raw material. Had I known in time that

I was to discuss this subject, I could have brought exhibits to show some of the causes for complaints concerning woollen fabrics, and that they are not due to the use of reworked wool.

And right at that point I would like to say that so much has been made of this question of durability that I want to say that if the only clothes sold in this country by the retailers were sold on the basis of durability, the wool grower, instead of only growing half the wool required for the American people, possibly would have more than an ample supply. The basis of the purchase of woollen goods by most of the purchasers in this country is not the component of durability. It is the factor of sightliness and style. If durability is wanted, and if it is the duty of Congress to legislate to inform the public what will give the greatest durability, my advice would be that you proclaim cotton corduroy as the most durable fabric for men's clothing. Made exclusively of cotton, it is probably the most durable of any textile fabric that can be made for men's clothing, for all sorts of wear and hard usage. People, of course, will not buy corduroy because, although it possesses the merit of durability, it lacks the other essential merits of style and attractiveness and feel and handle which all go to make the value of cloth.

There remains to consider that fourth basic reason alleged in support of the bill, namely, that the branding of goods to show the components will create an increased demand for virgin wool. If this is true it can only be through the capitalizing of a traditional prejudice. The purchaser who has heretofore bought garments at relatively moderate prices which have contained reworked wool, to obtain garments at the same price made wholly of new wool must be content with a poorer structure or poorer raw material. If out of a given price a larger amount must be spent for raw material the structural design—the fabrication must be less expensive and poorer. If the virgin wool is to cost no more than the reworked wool it replaces, the virgin wool used must be of inferior quality. From one or the other there is no escape.

Most buyers, the great mass of the people, buy their clothing according to the price. They want the best suit they can buy for \$15, or for \$20, or for \$25. If a man is accustomed to buy a suit for \$20 and have that suit give sightliness and strength and durability and all of the various things which go to make it desirable to the purchaser at \$20, still, only paying \$20, is incited to demand only virgin wool, then he must get for that \$20 suit one that is either an inferior grade of virgin wool, one that will be less agreeable, or else he must get an inferior structure of the cloth, which also goes to the question of durability.

In attributing the present large surplus stocks of wool to the use of shoddy the supporters of the bill are not as candid as such ardent advocates of truth ought to be. They well know that accumulated stocks are the result of the derangements of war whereby enemy countries were for nearly seven years deprived of the large amounts of raw wool they normally used. Deducting the amount equal to what that consumption would have been and the world's stock of wool would be inadequate for present needs. . . .



## MISSTATEMENTS BY PROPOSERS' WITNESSES CORRECTED.

MR. WOOD. I have not been able to hear all of the testimony, but there were a few statements that I would also like to correct in the record. Some of them are material, but some not particularly material.

These corrections have more particular reference to the value of the statements of the witness on technical points. Some statements were made in a very confident manner which would naturally carry to the minds of the committee a competence to testify on these questions, unless the record was corrected. It would only take a moment to take that up. . . .

. . . Quarter-blood is much too coarse to successfully spin to yarn of 42's count, and three-eighths-blood is not fine enough to spin yarn of 50's count.

Carbonizing properly done does not impair the strength of the fiber; if it did, a large portion of the noils (which are classed as virgin wool by the bill) would be equally impaired, for they, too, have to be carbonized extensively. Some varieties of fine cloth made wholly of virgin wool require carbonizing after the fabric has been woven. . . .

In quoting the profits of shoddy makers—and by shoddy makers I mean people who convert clips and rags into products—the witness neglected to state that the percentages given in the report were of gross profit before deduction of interest, Federal taxes, and other such financial items; also that the business is one of large turnover in proportion to capital employed. It is usually true that businesses in which the capital employed is small in proportion to such business are largely in the nature of individual service. I knew of an instance of a young man in his first year in business with only the modest capital of his savings who turned it thirty times; with a profit of but 5 per cent on his sales the return on his capital was 150 per cent for that year.

A sample of tender cloth was exhibited, the wholesale price of which was given as \$5 per yard. Mr. Alexander Walker, the leading spokesman for this bill, is an expert in cloth values. I would like to ask him whether cloth such as that sample could be sold anywhere in the United States at \$5 a yard, or anywhere near that figure. Whatever may be the fact with regard to retail prices, it is certain that those who buy in a wholesale way would never buy such goods at such a price.

A serial number would mean little to purchasers in remembering the quality of previous purchases. If any identification is made for that purpose, it should be the maker's name, not the alias of a number; and if the name is applied that would afford a protection which percentage statements of raw-material content would not.

The war-time advance in the price of some grades of rags was quoted as being in some cases as much as 500 per cent. A reference to the report from which the figure was quoted shows that the average per cent of advance was less than the percentage of increase in virgin-wool prices. The exceptions were such things as blue clips which had a special value for Government use because they were dyed with pre-war dyes, did not need redyeing, at a time when

dyes of equal quality were from 1000 to 2000 per cent above pre-war prices.

There was reference also, which caused some confusion I think, to a sample of fine wool, costing 25 cents per pound, and a sample of shoddy—Government khaki—costing 5 cents per pound, and some comparisons were made of the cost of the material content of the cloths made of these two substances. It was not made clear that for the wool the price named was for wool in the unscoured state, and the 5-cent price was for Government khaki unskirted. The comparison should be made between the costs of the two materials ready for manufacture, which were probably about 62 cents and 15 cents. Before that could be converted into shoddy ready for the machinery of manufacture like wool it would have to be put through the courses which have been described by previous witnesses, which would increase the price very greatly, so that the 5-cent cost would be about 15 cents when converted into shape ready for use. . . .

MR. WOOD. What I am trying to state is that the impress of maker's name and address on a garment carries with it a responsibility upon his part for all that goes to make it good afterward. . . .

#### WOOL MANUFACTURERS NOT ANTAGONISTIC TO DOMESTIC WOOL GROWERS.

It seems to be necessary to correct another false impression that has been frequently conveyed here, namely, that wool manufacturers are not interested in the fostering of wool-growing in this country. Independently of narrow, economic interests, and on national and patriotic grounds, the manufacturers for years have given most substantial evidence of their earnest desire to maintain and develop this industry. And speaking as their authorized representative, I can subscribe to all that has been said in favor of helping to make and keep the American sheep industry prosperous. I know that is the sentiment of substantially all wool manufacturers, notwithstanding the efforts which have been made in some quarters to encourage suspicion, distrust, and animosity upon the part of wool growers toward their best customers. We should and can easily have in the United States upward of 100,000,000 sheep; and if a consistent national policy to that end is persistently followed I have no doubt that we shall. But in my judgment the kind of agitation that is being carried on in support of compulsory legislation for wool manufactures, and wool manufactures alone, is doing more to postpone the revival of the American sheep industry than almost any other factor. . . .



## PASSAGE OF THE ROGERS-LODGE BILL ADVOCATED.

THE Rogers-Lodge bill, purposely belittled, and misrepresented by the proponents of the French-Capper bill as simply a misbranding bill, would punish all guilty of misrepresentation to consumers selling any commodity, and would not be restricted in its applications alone to textiles containing shoddy. Its passage in place of the French-Capper bill was urged by Mr. John P. Wood who said:

Those for whom I appear have for many years been urging enactment of a law similar to one that has been in force in Great Britain for more than thirty years. The British law is known as the Merchandise Marks Act. It was designed to prevent and punish misrepresentation in connection with the sale of all kinds of goods and has effectually accomplished its purpose. A bill of this character, modeled on the British act, adapted to American conditions, has been introduced in several Congresses by Representative Rogers and is now before a committee of the House of Representatives. A bill identical with that of Mr. Rogers was recently introduced in the Senate by Senator Lodge (S. 1882). If this Rogers-Lodge bill is enacted it will effectually safeguard the consumer so far as it is in the power of Congress to afford him protection and will not create conditions that will cause the consumer to deceive himself which the French-Capper measure will do if enacted. And the Rogers-Lodge bill will do no injustice to the manufacturers of good virgin-wool fabrics by officially classing them with inferior goods made of virgin wool, as would the French-Capper bill. Nor will the Rogers-Lodge bill increase the cost of goods to the consumer as will the French-Capper bill.

The proponents of compulsory branding say that a misbranding law, like the Rogers-Lodge bill, would be ineffective in the case of goods containing shoddy which are sold as "all wool," because shoddy is all wool. That objection can be readily removed by incorporating in the bill such a definition of all wool as will be inclusive only of pure new wool and exclusive of any shoddy, reworked wool, or wool substitutes. Then the sale or offering for sale as "all wool" of any article which in truth contained reworked material would subject the offender to the sufficient penalties of the act.

SENATOR WATSON. You say that is similar to the English law?

MR. WOOD. Yes, sir. It was drafted from the English law, but the English law recites a good deal of English phraseology, is rather cumbersome, and the language of this bill has been made more in consonance with American practice. That bill, I think, is now before your committee.

Rising to correct false impressions created against the Rogers-Lodge bill Mr. Paul T. Cherington, secretary of the National Association of Wool Manufacturers, said:

It has been stated from time to time that that bill is wholly inadequate for the protection of the public on various grounds, notably that it covers only misbranding. I want to quote one or two sections from the bill to correct that impression. In section 2 of H. R. 16 (the Rogers bill) the bill provides:

That every person who, in any Territory of the United States or in the District of Columbia, misbrands, or misrepresents, or causes to be misbranded or misrepresented or applies or causes to be applied any false trade description to any goods, wares, merchandise, or things,

and so on.

The same wording approximately is used in section 3 to cover the selling or exposing for sale in the Territories of the United States and in the District of Columbia.

Section 4 provides:

That the introduction into any State, Territory, or the District of Columbia from any other State, Territory, or the District of Columbia, or from any foreign country, or shipment to any foreign country, of any article of commerce or trade or other commodity which bears a false trade description or which is misbranded or misrepresented within the meaning of this act, is hereby prohibited.

One other point that I want to bring out in connection with this is contained in sections 5 to 10 of the bill, which set forth the definitions as called for in the law. Particularly in section 6 it is provided:

That for the purposes of this act the expression "trade description" means any description, statement or other indication, direct or indirect—

(a) As to the number, quantity, quality, grade, measure, gauge, or weight of any goods.

Then there are provisions as to the place or country, and the mode of manufacturing, and (d) is as follows:

"As to the material of which any goods are composed."

And there are other provisions of a kindred character. Those, however, are the ones that I want to call particular attention to, because it seems to me that the measure as thus drawn is calculated to protect the public's interest in so far as the public's interest may be jeopardized by any unfair trade practices coming within the scope of the bill under consideration; and that it does it by an accepted principle of law by a method which has been tested for over 30 years, and which has the advantage of being entirely

feasible of administration without causing undue burden on any producer or manufacturer or distributor who has any inclination to be honest, without putting any undue burden on the public, and at the same time giving the public an adequate safeguard against any possible abuse.

The concluding portions of the measure set forth a definite program and method of administration, which also is based on existing laws of a kindred character, and as nearly as can be judged, taken in connection with the provisions set up by the first part of the law, offer a thoroughly feasible and practical and economical method of administration. (Hearings, p. 362.)

## COMPULSORY BRANDING AND THE SYSTEM OF FABRIC DISTRIBUTION.

### FUTILITY AND COSTLINESS OF THE PROPOSED LAW SHOWN BY EXPERTS IN CLOTHING MANUFACTURE.

In order to show clearly how useless, cumbersome, and costly the process of compulsory branding of wool fabrics would be under the proposed French-Capper bill we have arranged here in order from the clothing retailer back to the wool merchant statements showing how the various steps in distribution would be affected.

These are all taken from the recent hearings before the subcommittee of the Senate Committee on Interstate Commerce.

The first is a resolution passed by the Board of Directors of the National Association of Retail Clothiers and is as follows:

The board of directors of the National Association of Retail Clothiers in session at Chicago, on June 2, after careful consideration of the regulations asked for under the bills known as the French and Capper bills for the labeling of merchandise to show its constituent parts, are unanimously and firmly of the belief that such legislation does not afford to the consumer the protection that is claimed for it by its supporters. To the contrary, it is the belief of the board that if enacted into law it would legitimize certain misleading if not fraudulent misrepresentations regarding merchandise. It is the firm belief of the board that the law if enacted would prove not only impractical, but impossible of enforcement.

The board of directors is not adverse to legislation that will protect the interests of the consumer and would gladly lend its support to any practical measure that would protect the interests of the consumers in the merchandise they buy, and they suggest some act along the lines of the British Merchandise Marks Act adapted to the needs of this country, which would make it a penalty to misbrand merchandise, as being practical and effective.

The board by this resolution strongly protests against the enactment of the French and Capper labeling acts for the above reasons.

MR. JOHN W. HAHN, Executive Secretary of the National Garment Retailers' Association, New York City. The National Garment Retailers' Association, composed of 1200 retailers of women's, misses', and children's wearing apparel throughout the country, do hereby emphatically register their protest against the passage of bill S. 799, introduced in the United States Senate by Senator Capper, and submitted to your committee for consideration.

If there were no other reason for our opposing this measure, we would do so solely on the broad ground that it is class legislation and is urged only in the interest of the wool growers. We believe that

it has never been the intention of Congress, and it is not now, to pass any legislation which would promote the interests of a few in one section to the disadvantage of others in other sections of the country.

The bill itself, we believe, is misbranded; it would not "prevent deceit and unfair prices that result from the unrevealed presence of substitutes for virgin wool in woven fabrics," etc., as claimed for it. On the contrary we believe the passage of this bill would encourage malpractice and dishonest dealing.

Your committee will see that there is nothing in the bill which would in any way compel those trade factors handling woolen fabrics to specify on the labels or brands the quality of the wool going into the fabric. There are many qualities and standards of wool, and simply to say that a fabric is 100 per cent virgin wool, is in itself no recommendation or standard, and would mean nothing in the way of protection to the public. On the other hand, such a law would mislead the public to believe that all fabrics or garments branded 100 per cent virgin wool are of the best quality and superior to wool mixtures, though the intrinsic value of the mixtures may be greater than that of some virgin-wool fabrics.

So the passage of this measure, in our opinion, would place all virgin-wool fabrics on the same level, and dishonest traders so desiring could easily take advantage of the law to enrich themselves at the expense of the consuming public.

#### HOW THE PUBLIC WOULD BE DECEIVED.

To illustrate how the public might be deceived under such a law: Two garments of the same style and character, one of excellent virgin-wool and the other of inferior virgin-wool fabric, would be branded identically the same. Naturally the public would consider them of equal value, and traders so desiring might easily increase the price level of the inferior virgin-wool garment to that of the better virgin-wool garment and extort an unfair profit. The public, of course, would take it for granted that they are fully protected under this legislation.

Then, again, if the garment of the inferior virgin-wool fabric was not advanced in price, would not this bill put the honest traders to a great disadvantage? We believe it would, as the honest trader would have great difficulty in convincing the public that the fabrics of his garment are of a better quality virgin wool than the fabrics of the dishonest trader, and the public would simply accept his statements that they are better as attempts on the part of the honest trader to excuse high prices.

Every factor in trade to-day is striving to bring down prices so that there will be a general resumption of trade and a return to normal conditions. Pass this legislation and, in our opinion, instead of declining prices, the public will witness increased prices on all virgin-wool fabrics.

This bill intends to brand or label fabrics or garments as to the percentage of virgin wool. To say that a cloth is a virgin-wool fabric is no particular recommendation for it as against the fabric made partly of shoddy and virgin wool. To the trade shoddy means re-



worked wool; to the consumer it means an inferior substitute, and this misconception would only be confirmed in the opinion of the public by the passage of this law. Naturally the public would assume that their conclusion that shoddy is inferior was justified, for otherwise, they would reason, the United States Congress would not find it necessary to pass legislation compelling the labeling of fabrics containing shoddy. So you would find the public more and more turning from those fabrics composed partly of shoddy and accepting only virgin-wool fabrics, regardless of the merit of the wool-mixture fabric and the quality of the virgin wool.

Shoddy does not mean inferiority. We, ourselves, find it almost impossible to determine, even by careful analysis, whether certain fabrics are made partly of shoddy and partly of virgin wool or entirely of virgin wool.

Much has been said, Mr. Chairman, at this hearing regarding shoddy. Nothing has been said regarding goats; if this bill were passed into law the retailers would be the goats, and that is why we are here protesting, because we do not want to be the goat.

#### PASSAGE OF BILL WOULD ADD TO GARMENT RETAILER'S OVERHEAD.

In our opinion, the passage of this bill would add to the garment retailer's overhead by necessitating the maintenance of a vigilance force within the store to make certain that the provisions of the law are being properly carried out. A bureau of scientific research might have to be established to test the fabric of each garment, especially to ascertain the amount of cotton, if any, contained in the fabric before offering it for sale, to be assured that the labels attached by the manufacturer are correct and truthful, for the burden of proof under the bill rests upon the retailer. In case of error it is obligatory upon the retailer to prove that the label attached to the garment going out of the store was the label passed along to the store by the manufacturer.

The committee will realize that the retailer might be wholly innocent of the offense, yet it would, in some cases at least, be difficult for the retailer to prove his innocence. The committee will also appreciate that retailers during the course of the year have returned to them hundreds of garments purchased by the public which in many cases have been worn. If the label were detached, as it probably would be by the consumer, what guaranty would the store have that the label and garment returned were associated when they left the store? Some garments would likely come back without labels; many garments, especially those returned for no other reason than that they do not please the customer, are sold over again. How could the store protect itself on these garments if the labels had been removed?

Labor leaders with bolshevik tendencies might well use the passage of this law for the purpose of stirring up greater unrest, emphasizing class distinction, and pointing out the advantages the rich have over the poor, even in the buying of clothing. They might attempt to convince the poor that only the wealthy could buy garments of virgin wool while the poor must buy cheaper grades, where cotton and shoddy are used as a mixture with virgin wool.



If such protection were needed—and we declare it is not—there are sufficient State laws to give the public adequate protection along this line without Federal legislation. We believe that the intention and desire of the stores to deal honestly is a greater safeguard to the public than all the laws of this kind that Congress could enact. Stores that are dishonest can not continue long in business.

But we respectfully call to the attention of the committee that 36 States in the Union now have advertising laws sufficiently embracing to protect the public against false and misleading statements, not only when used in the sale of woollen fabrics and garments of woollen fabrics, but all kinds of wares and merchandise.

If it is the intention of the supporters of this bill to sincerely protect the public, all that is needed upon their part is to check up the offenders and prosecute them under the law in these 36 States and to urge the adoption of similar laws in the remainder. For the information of the committee we are submitting the complete text of the honest-advertising law, known as the Printers' Ink model statute, which, we believe, takes care of the condition which the supporters of this bill claim exists.

MR. PAUL PRAGER, Manufacturer of women's clothing, New York City. I propose to confine myself exclusively to the impracticability and workability of the bill. We are not so much concerned in the truth in fabric bill as proposed as the truth in legislation. Enactment of this bill, in our opinion, would only add greater cost to the consumer, and we are interested in the question as to who is to pay the bill. We sympathize with the sheep industry, and any bill that would give their industry relief would be welcomed by us, provided it did not, by the workings of the bill, tax an excessive levy on the many to support the few.

The proponents of the bill take the wool from the sheep's back and by some magic process transport it immediately to the consumer of ready-made garments. They tell you, as has been testified here, that all that they require to make the sheep industry a profitable industry is a 20-cent advance on the present price of wool, and that this advance, based on an average of  $4\frac{1}{2}$  pounds required to make a garment, would only add \$1 to the cost of the garment—that is, to the consumer—without taking into consideration the many ramifications that this wool must pass through before reaching the consumer.

Taking their own figure of \$1 added cost per garment, the wool buyer, before passing it on to the woollen manufacturer, would have to add his percentage of overhead cost plus the profit of the woollen manufacturer; it becomes one of the factors in determining the cost of his material, to which he adds his percentage of overhead and profit and passes it on to us. We have to calculate our garments based on this cost and add on our percentage of overhead and profit and pass it on to the retailer. The retailer must add his percentage of overhead and profit and he must collect this amount from the consumer, who in the final analysis pays the bill. And, mark you, this is only based on the assumption that wool will advance only 20 cents a pound.

If this bill is enacted and the fondest hopes of the wool growers

are realized, and the demand becomes greater than the supply and keeps on increasing, and the price of wool has advanced beyond 20 cents a pound and keeps on climbing, I will leave it to the judgment of the committee as to what will be the size of the bill that the consumer will have to pay.

It would be exceedingly difficult for a spurious fabric to get into our industry. If there is one thing that our industry does do and does well it is to give to the public the best wearing and most stylish material that it is possible to give for the priced garment it is able to purchase. Before placing an order for any quantity of material, we require a sample piece to be delivered and we put it to every test that is necessary to determine its durability for the purpose and for the priced garment in which we intend to use it.

Having passed the inspection of our examiners, it is sent to the sponger again to be examined for possible imperfections in weaving, in shading, and for tenderness. If the sample piece meets all these requirements, an order is placed and every piece of goods that is delivered against this order is subject to the same tests, and every piece not coming up to the requirements of the sample or found imperfect is rejected by our examiner and sponger, and returned to the mill from which it is purchased.

#### INNUENDO THAT ADULTERATED CLOTHING IS FORCED UPON CONSUMER RESENTED.

We resent the slur cast upon our industry by direct testimony and by innuendo that adulterated clothing is forced by us upon the consumer; that we take their good money and give them counterfeits in exchange.

I have no knowledge of the sheep industry, the shoddy industry, the spinner, the weaver, or how our goods are manufactured greater than is possessed by the average intelligent citizen, nor am I going to wander into pastures I know not of, but from the time the finished cloth is delivered into my hands until it reaches the consumer as a finished garment I do know as a result of my 33 years' experience in the garment-manufacturing industry.

I have been brought up in it from a boy, and have been through all the different sales houses.

The national demand for revision of prices downward has compelled us to exercise the most rigid economy and to scrutinize production costs and to apply the pruning where possible without impairing efficiency. Our great need to lessen prices is production; we cannot reduce wages in the same ratio that other commodities are being reduced, but we are asking that there be more production for the same rate of wage, and right now we are devoting all of our energy for this purpose, and if this bill is enacted into law, it will, as I will later point out, slow up production to such an extent as to exceed the prices that had to be asked for manufactured garments during the war period.

As regards the stamp that would be required under this bill, we would have to demand of the mills that it be placed on the selvage. We cannot use materials with the stamp in the back.

As stated before, our garments are made for us by sub-manufacturers and contractors, and there are employed for the making of ladies' coats, suits, and skirts approximately 50,000 workers, divided up into about 2200 shops. These workers are all foreigners, the great majority coming from Russia, and a great number do not even speak our language and have to be dealt with through persons able to speak their and our language.

They are very clannish, congregate in one locality, bring their foreign and religious customs with them, read only papers printed in their own language, observe all the holidays that their religion calls for, and these are many, and come mostly in the heart of our season. If you should perchance be in their locality any morning that they go to work and ride in the same public conveyance that they do, you would not see a single English paper read or hear the English language spoken, and it is to these people in our industry that must be intrusted the duty of complying with this law, when it would tax the intelligence of the average intellectual person to interpret its condition.

The wages generally amount to about—it averages from an operator at about \$60 a week down to as low as \$30.

I profess for myself but an ordinary degree of intelligence. I have been in this garment industry since a boy of 18 years of age, and have not had the opportunity that others have had to acquire that knowledge that everyone desires, and I want to say right here that I am hazy on a great many points in this bill regarding the manner in which it is to be enforced.

IF DESIRED LAW SLOWED UP PRODUCTION ONE GARMENT PER MACHINE IN TWO DAYS COST WOULD BE INCREASED TWENTY-FIVE PER CENT.

The workers in our industry work 44 hours a week and are highly paid. I mean by that the operator is paid the highest of all; we have operators that are paid \$120 a week; the minimum is \$50. They produce on an average of only four garments a day for each operator, and, as stated before, we are bending every effort to increase this average production to at least six garments per day in order to lessen the price of the garment to the consumer without being forced to furnish cheaper materials in order to meet the popular demand for lower priced garments. If the enactment of this bill would slow up the production only one garment per machine per two days, and we contend it will be greater, it will raise the cost to us at the very least 25 per cent. The workers in our industry work on week work and not on piecework, as heretofore, and they are only looking for an excuse when accused of soldiering on the job, and the French-Capper bill will be blamed for the slowing up of production even if it were not all the fault of the bill.

The sub-manufacturers who have these week workers in their shops solicit orders from our members on a very close margin, sometimes making as low as 25 cents on a garment, and depend only on the volume of garments they can produce within a given time for their profit. I might say incidentally, in rare cases, they depend on the value of the clippings they can get out of the cuttings.

There is employed by each member of our association, or the du-

ties filled by a member of the firm, what is known as a style producer and buyer. To this party these sub-manufacturers come and display sample garments. If the styles shown meet with the approval of the buyer, he usually places an order with the sub-manufacturer under styles shown, or will make such changes as he thinks might increase the selling possibility of the style. Sometimes it is made of a checked jacket, a broadcloth vest, and a plain-woolen material skirt, necessitating under the proposed bill, if enacted, three labels to this particular garment. This sub-manufacturer is furnished with enough materials to cover the amount of the order placed with him, and if the order he has received from one of our members is not large enough for the capacity of his plant, he keeps on soliciting more orders from other garment manufacturers, receiving from each garment manufacturer the cloth for the garments ordered, together with the labels, and before he is through, and especially at the beginning of a season, he may have had to secure orders from ten or more garment manufacturers with as many kinds of materials and the labels that go with them before he is able to keep his plant going a reasonable length of time.

He is skilled in the producing of garments to a high degree, he knows economy to the nth degree, but that is all that he does know, or if he does know more, cares little about it. He is only interested in getting his orders and fighting for his price, and after having received his orders to produce his garments as economically as he can, and if anybody knows that it is the sub-manufacturer in our industry.

#### TRoubles Labels Required by Proposed Law Would Cause.

Having this in mind, he can not cut a single size of any order unless he has enough orders to make a full lay; that is, to the capacity of the electric-cutting machine that he uses. In making this lay he uses the materials best suited for this purpose irrespective of what manufacturer it comes from. Materials vary in width, running after sponging from 48 to 56 inches in width, and in order not to waste material he must cut all the same widths together.

When the lay is completed the cutter lays out the pattern and must chalk out his pattern inside the selvage, and when he is through cutting out the garments the original marks of identification that the proposed bill, if enacted, would compel the mills to put upon their materials, together with the license number, will have been obliterated.

When the garments are cut, they are sent to the assorter who assort the bundles.

There is again a lining cutter, who cuts the linings, and they are assorted in separate bundles.

The cloth bundles are sent to the basters, who baste in the canvas, and then they go to the operator, who sews the garment on his machine. Then it goes to the underpresser, from there to the tailor, who sews in the lining and all other necessary handwork, from there to the buttonhole maker, and then to the uppresser, and finally to the finisher, the cheapest-paid labor of all, and it is this person's



duty to put the finishing touches to the garment, put on the buttons and other necessary trimming, and sew on the proposed label.

All this time the hundreds and hundreds of labels that this sub-manufacturer has gathered from the various garment manufacturers from whom he received orders are either in his office, if he has any, or been handed to his foreman, who places in the basket of the finisher as many labels as necessary, and, mark you, in many instances it may require two or three labels for a single garment, and he or she simply reaches in the basket, picks up and sews on the first label he or she comes to. It would be utterly impossible for the finishers to pick out the proper labels, if they were able to, for as stated before, in the majority of instances they are unable to read and write English, and even if they were they have no expert knowledge of cloths. The bill, if enacted, would have to be enforced, and it would necessitate in this sub-manufacturer's place of business experts far beyond the caliber of people in his employ and at such increased expense and such waste of time as to materially reduce his production to such an extent that the price of the garment, due to the cost of producing the garment, would almost double.

#### INDUSTRY IS SEASONABLE AND LARGE PRODUCTION IS NECESSARY.

Ours is a seasonable industry. It is absolutely essential in our industry that the shortest possible time must elapse from the receipt of its order to its delivery. Garments come into our place of business commencing about four o'clock daily in enormous quantities, and must be examined, charged, and shipped that very same day. In order to live up to the full provisions of the proposed bill, if enacted, it would entail upon us the employment of a force much greater than the present force used in the receiving and shipping of garments, and after we had gone to all that expense we could still not be certain that the right labels were on the right garments. If a certain material is in vogue, or a certain shade is in vogue, the demand for that particular material or particular shade is so great that we are compelled to buy the material from as many mills or from any place or from any cloth jobber from whom we can obtain it. We even have to go so far as to call upon other garment manufacturers to help each other out in their dire needs of that particular material or shade. These various materials are furnished by us to the sub-manufacturer; they are all more or less similar in character, but the component parts of wool or shoddy might be greater or less in one or the other, and while it might be true that by the mark required to be put upon the material by the proposed bill we would absolutely know the composition of the material when it went to the sub-manufacturer, yet after the process heretofore outlined had been resorted to in the course of manufacture and all markings necessary obliterated we would have no possible means of knowing from which mill the material of each garment came, and I doubt if the mill men themselves would be able to detect their own materials.

The passing of this truth in fabric bill would impede the progress and reduce the output of our industry, in which millions of dollars

are invested, to an alarming extent, and to one that might result very disastrously, with no resultant benefit to the consumer.

Therefore, on behalf of the association that I represent, and on behalf of our industry, and for the reasons just stated, and for the further reasons that, first, it improperly and incorrectly attacks the question of misrepresentation of merchandise; second, it sets up false standards for judging the different kinds and grades of fabrics; third, it will seriously impair and impede commercial progress; fourth, that it will entail an unnecessary expense in the production cost of merchandise without benefit to the consumer—I desire to go on record as opposing the passage of this bill. (Hearings, pp. 351-357.)

#### TERM VIRGIN WOOL WOULD COVER MANY REJECTED FABRICS.

MR. SIGMUND B. SONNEBORN, Manufacturer of men's clothing, Baltimore, Md. My opposition to the bill, Mr. Chairman, is due to the fact that I believe that calling anything virgin wool and putting it out to the consumer is bound to mislead the consumer. We have to ask ourselves: What is pretended to be meant by virgin wool? If the name "virgin wool" would be applied to all the fabrics that are really made of virgin wool it would cover a great many fabrics which we have discarded from use because we know that they are too poor to be used. They are unsatisfactory goods. In other words, the words "virgin wool" could be used on classes of goods which we would not think of using, because they would not give real satisfaction.

SENATOR WATSON. Would this labeling proposition injure you or help you, or make any difference to you?

MR. SONNEBORN. Well, it would be very difficult to say. I do not think it would injure us; I do not think it would help us. I think it would befuddle the consumer.

SENATOR WATSON. You think it would befuddle the consumer?

MR. SONNEBORN. Yes; and it would certainly add a considerable amount of unnecessary work to the clothing manufacturer, especially if the question is to be asked: How is it going to be marked on the suit? Is it going to go on the coat only? Is it going to go on the vest? Is it going to go down on the trousers, because trousers are sold separate and coats are sold separate. If you figure that the label is sewed on, and then figure the branding of it, the making of it, the sewing on of it, I should judge that the pure labor of attaching the labels on every suit of clothes would burden that suit around from 15 cents to a quarter, because the way suits of clothes are made—we manufacture suits in layers, and we will take a blue cloth and lay it on the table, and right on top of it we may put a green one, and next to it we may put a brown one, and then again a blue one, and we can lay that up three or four or five or six or seven high; I think that is about as high as we will go, and then they afterwards are separated in manufacture. No; if you were to stamp every one of these goods, that would mean a great deal of work that would finally have to be charged to the consumer, and would add considerable to the cost. (Hearings, pp. 335-343.)



## LABELING OF GARMENTS WOULD BE TREMENDOUSLY DECEPTIVE.

MR. GEORGE S. LEWY, Representing the Dress and Waist Manufacturers' Association, New York City. Mr. Chairman and members of the committee, in behalf of the members of the association who manufacture dresses, and speaking also for the Association of Dress Manufacturers, I desire to submit the following comments for your consideration in connection with the French-Capper bill:

First. It appears to us that the labeling of materials used in garments must result in an increased cost to the consumer. At present thoroughly dependable worsted and woolen materials of good wearing qualities are used to make dresses, and they give satisfaction to the consumer. We do not know whether or not they contain shoddy, but if they do and the proposed measure is enacted into law, it will be impossible to use such materials any longer, as the consumer is not sufficiently educated in materials to understand that a shoddy content may not at all affect their wearing quality, and will fight shy of a material not labeled "virgin wool." The cloth to replace the materials first mentioned will cost more, we must assume.

SENATOR WATSON. You are engaged in the manufacture of ladies' wear?

MR. LEWY. No, sir; I am the secretary of the trade association; the trade's manufacturers.

SENATOR WATSON. This has reference, of course, to women's dresses altogether?

MR. LEWY. Yes; entirely.

SENATOR WATSON. How many members are there in your association?

MR. LEWY. In our particular association, 185; but in the Associated Dress Industries of America, we have close to 500 members; that is a national organization. . . .

The very word shoddy is distasteful to the ordinary consumer who does not know that it stands for wool used over again, but does believe that shoddy means something bad.

Second. A cloth may be made wholly of virgin wool and still be far inferior to and have poorer wearing qualities than one with a shoddy content, though costing more.

## THE PUBLIC WOULD BE MISLED.

Third. The public will be misled by the virgin-wool label, and instead of depending upon the reputation and reliability of the retailer, who, to guard that reputation is certain to see that the dresses he sells are made of serviceable materials, will depend upon the label solely. Two dresses may be manufactured of exactly the same style, the one from a material of low-grade virgin wool, the other from a material of high-grade virgin wool. The one made of the low-grade material will naturally sell for less than that made from the high-grade material; yet both dresses will carry exactly the same virgin-wool label, and the public will be deluded into buying a poor article simply because its price is lower. While apparently cheaper, the lower priced article may in reality be more expensive

in the end than the higher priced. The label has been of no assistance whatever to the consumer, but has simply misled her.

Fourth. The business of the dress manufacturer who would use high-grade virgin-wool materials, and who has a reputation to maintain, would suffer from the competition of the dress manufacturer who would use low-grade virgin-wool materials, and who could undersell him style for style; that is, two styles may be made, one of a low grade, and the other of a high grade, and the low grade would outsell the other, because of the label.

DEPEND UPON MATERIALS BOUGHT FROM REPUTABLE MILLS—NOT ON PRICE ALONE.

Our experience in buying cloth has taught us to depend on materials bought from reputable mills in whose output we have confidence and whose goods have proven satisfactory, rather than to be attracted by price alone. We could continue to so depend and would prefer to buy a wool fabric, even though it may contain shoddy, which had previously given satisfaction, rather than buy a virgin wool fabric without any reputation behind it.

Our success, however, in convincing our customers that the garment labeled as containing shoddy is exactly the same one that had hitherto proven satisfactory without the label would be highly problematical. In fact, we believe we could not convince them, no matter how meritorious the cloth might be. We prefer to continue doing business along the established lines of confidence, rather than be plunged into a mass of experimentation at a time of readjustment such as this.

Fifth. The bill appears to us to be class legislation. If it be necessary for the protection of the public to label wool materials as to their content, it should follow that other materials should be labeled also. Silk materials often contain cotton or other admixtures; linen materials often contain cotton, although it has never been maintained to our knowledge, that linen mixed with cotton is not a thoroughly dependable material. Selecting wool alone to be placarded as to whether or not it has entered into a cloth in conjunction with other fibers, some of which may be wool, appears to be class legislation pure and simple in favor of a very small portion of the public at large, and having for its admitted purpose the enhancing of the price of wool.

Sixth. We believe it would be almost impossible to enforce the provisions of the bill. It has been admitted by the proponents that shoddy cannot be detected once it is mixed with virgin wool. There is nothing, therefore, to prevent a manufacturer of cloth with an atrophied conscience—and there may be such—from mixing shoddy with virgin wool and labeling the product "vîrgin wool." To prevent this would entail the maintenance of a large force of inspectors throughout the country at a large expense, and the result would hardly justify the expense, as the consumer would be protected solely against a phantom.

Seventh. A representative of the dyers and cleaners stated that his industry was suffering because it did not know the composition

of the cloth that entered into the garments given over to be re-dyed or cleaned. He believed that the label would solve this difficulty.

#### WHAT CONSUMERS WOULD DO WITH THE LABELS.

It is safe to assert that the first thing a consumer would do would be to rip out any label that would indicate the garment she may have had the courage to purchase containing shoddy. It is a known fact in our industry that women will remove from a garment the label of a high-class dealer and sew it into successive garments for years and years, but there is no probability that this would happen with the label under discussion.

That is a fact, they will take the label of a garment from a very high-class dealer and sew it into another garment.

Further, the same gentleman stated that it was the hope of the dyers and cleaners that the bill would reduce the establishments in that industry from 200,000 to 50,000 or 100,000, so that the interest of the dyers and cleaners in the measure can hardly be viewed as purely altruistic.

Eighth. In conclusion, our argument may be summed up as follows:

The proponents desire to sell more wool by barring shoddy entirely, as it is almost certain that no matter how small the admixture of shoddy, consumers will not buy anything labeled shoddy. That this is also the belief of the proponents of the bill is clearly evidenced by section 14, which provides:

The term "shoddy" shall include any material obtained from any fabric or clipping of cloth of any fiber whatever, or secured from rags or from used apparel of any description, or any fiber that has been previously spun or woven into cloth, as well as wool, hemp, jute, flax, and hair fiber not properly classed as wool of any description, and from whatever source obtained.

The term "shoddy" as understood in trade circles hitherto has meant reworked wool. The new definition here given it, and piling upon it the responsibility of being spokesman for wool, hemp, jute, flax, hair, and even feathers, must clearly indicate that the proponents desire to bury it beyond any hope of resurrection, and to make it stand for something even more sinister than the meaning it already has in the public's understanding. Why, it might as well have been defined "shoddy, any old junk that is not virgin wool." (See Hearings, pp. 344, 345, 346.)

MR. WILLIAM GOLDMAN, of New York, clothing manufacturer; formerly president of the National Association of Clothing Manufacturers, and at present chairman of the Mutual Adjustment Bureau of the Cloth and Garment Trade. The proposal to label garments so as to indicate the constituent elements of the fabrics of which they are manufactured, accurately and in detail, is objected to by the clothing manufacturer because he believes—

First. That no such legislation is demanded by the consumer,

nor is required in the interest of the consumer, and the advocacy of such legislation is confined largely to those who would be the beneficiaries of the enactment.

Second. That it is impractical, and that violations of the law, if enacted, can not be prevented.

Third. That it is uneconomic in that its effect would be to curtail the consumption of reworked wool and wool substitutes and raise the price of wool.

Fourth. That it is misleading to the consumer in that it seeks to convey to him that wear and service are definitely related to the percentage of virgin wool contained in the fabric. . . .

When we undertake to denounce reworked wool or wool substitutes we are doing everything that we possibly can to raise the price of raw wool through larger consumption and make it cost more and to reduce the consumption and conservation of the waste materials, which have come to play such an important rôle in the sound economy of the world.

But the labeling of these garments would be tremendously deceptive to the consumer. Let me illustrate.

One class of fabric that is very widely sold to-day is a 28 to 32 ounce all-wool fleecy overcoating. These goods are fluffy and beautiful to look at. They will not wear, and yet they can be labeled "all virgin wool." Whereas there are numerous makes of fine kersey and melton overcoatings, the very finest, in fact, that are made up in the world, that have a very large percentage of shoddy or reworked wool in them, and there is practically no wear out to these fabrics. The consumer can get good service out of them for many years. And yet it is deliberately sought to pervert men's minds and to destroy their respect for these worthy fabrics.

There are numerous examples of cheap all-worsted suitings made. They are flimsy, they will not hold seams, they will give no wear, and yet can be labeled "strictly virgin wool," whereas if cotton is introduced into the warp or weft and mixed with this wool a very good wearing fabric will be provided for the man of very moderate means.

In the case of cassimere suitings we frequently encounter strictly virgin-wool fabrics that have neither selling quality nor wearing quality to commend them. They are flimsy and unreliable. On the other hand, we find innumerable examples of suitings which contain a moderate admixture of reworked wool or shoddy which are firm, hold their shape, give excellent wear, and provide as satisfactory clothing as there is manufactured.

I might go on and give numerous illustrations of how "all wool" means absolutely nothing so far as wear and quality are concerned, how the fabric containing either shoddy or cotton may mean everything in the life and service of the fabric, but in a general way let me say that the percentage of cotton or shoddy or reworked wool or wool substitutes that goes into a fabric gives not the slightest indication of the wearing quality of the fabric. Some fabrics made entirely of wool would be unserviceable and impractical, whereas with the introduction of a certain amount of cotton or shoddy they may be made to give the service required. . . .

MR. GOLDMAN. Here are three samples of overcoat fabric that contain a large percentage of shoddy, of reworked wool.

SENATOR WATSON. Do the people who make these goods say what amount of wool and what amount of shoddy they contain?

MR. GOLDMAN. No, sir.

SENATOR WATSON. How do you know what they contain?

MR. GOLDMAN. We know that this contains shoddy, and they do not deny that it contains shoddy, and it is a class of fabric that practically always contains shoddy. These are kerseys and these others are meltons. We sell these garments for about \$10 more than we sell these others. These contain about 10 per cent more shoddy than this other. Now, I want to make a conservative statement, and I will say that these goods that contain shoddy will wear about five times longer than these all wool goods. That is our experience and is the experience of clothing manufacturers generally, I think. . . .

#### PRICES FOR RAG CLIPS SHOW GREATER REACTION THAN FOR WOOL.

They have sought to create the impression that because of the present system the price of shoddy was considerably higher than it would otherwise be and was costing more and more. The reverse is the absolute truth. Clips can be sold to-day for only a very small fraction of their normal price. They have shown an even greater reaction in price than has raw wool. It is pretty serious business when an attempt is made like this one in a time when business depression has created tremendous problems for all industry, and every manufacturer is confronted with the necessity of readjusting himself and his business to the changed conditions that have come about, for a relatively small industry to upset vast business interests that through many, many generations have developed certain types of fabrics which long experience shows to be those best suited to our national requirements and not a moment's consideration should be given to the attempts to put through any such bill as is now proposed.

The clothing manufacturer, if this legislation is adopted, will not sell any less clothing. He will make up whatever fabrics the market offers and will not be injured in his pocketbook one way or the other, and my appearance here is not because of any financial interest that the clothing manufacturer has in this legislation, other than the added cost of labeling, which he must pass on to the consumer. But my appearance here is to try to block an attempt to fool the consumer of clothing by misleading him as to the wearing qualities of the clothes that he is to buy, to oppose something that is so uneconomic and unsound as this legislation would be, and also because I realize fully what it means to a vast number of woollen manufacturers who have through years of patient study and experimentation developed fabrics that they know will give eminent satisfaction to the consumer through a proper admixture of wool and reworked wool, and who would now be compelled perhaps to change their machinery and their product in an effort to find themselves under the new regulations.



## COMPLAINTS ARE AGAINST CONSTRUCTION, NOT AGAINST MATERIALS USED.

I have one or two other matters that I want to touch on, if you please. I referred to the fact that I was the chairman of the Mutual Adjustment Bureau of the cloth and garment trade. We have thousands of cases, in the course of a year, that come before that bureau for adjustment. I have never yet heard of a single instance where any case has been brought before that board that had anything to do with the fact that the fabric contained reworked wool instead of new wool. Our complaints that come before that board have largely to do with the construction of the fabric. Whether it be all wool or all worsted or all cotton, or whatever it may be, we never have had any complaints that I know of come before that organization with regard to reworked wool in the fabric. . . .

SENATOR FERNALD. Why should there be a difference of \$10? Does it cost you any more in the way of labor to manufacture a suit containing nothing but virgin wool than one containing shoddy? See if you can answer that question. . . .

MR. GOLDMAN. A coat made up of this material (exhibiting a piece of melton cloth) is made up differently than this (exhibiting a piece of fleecy cloth). I did not intentionally intend to mislead you by my statement. It probably is not fair. But when we get a fabric of this smooth surface it becomes a more dressy overcoat and we put more tailoring into it, and that is one of the things that most people cannot understand about the clothing business. We start to show, say, eight grades of clothing. The lowest grade has one type of lining in it; the next grade has a little better lining and the next grade has a still better lining. Then we have the same thing in the matter of tailoring. We grade our goods up from the lowest, and they gradually rise and everything rises with them. The cloth is only one factor, but as the cloth gets better everything else goes up with that better cloth. So it is with this overcoat. If we are going to get this dressier overcoat we put more into it, and it costs \$10 more to make it, although the cloth in one case is shoddy, where this is all wool. That is the situation.

SENATOR GOODING. And it will wear five times as long?

MR. GOLDMAN. And it will wear five times as long.

SENATOR GOODING. I want you to repeat that so we will have that in the record.

MR. GOLDMAN. Yes, sir; it will wear five times as long.

SENATOR GOODING. That is what I want to get into the record.

MR. GOLDMAN. I want to make this point, too: There has been a statement made here to the effect that big prices have been gotten for shoddy fabrics. Now, I simply want you men to realize that there is not anything manufactured in this country, in my belief, that is sold on a narrower margin of profit than woolen and worsted goods. This business is the most keenly competitive business that I know of.

SENATOR GOODING. Do you mean that the retailer makes a smaller profit?

MR. GOLDMAN. No; the manufacturers of the cloth. The reason I say that is this: They are dealing with about the shrewdest buyers



in America, men that thoroughly understand their business, men who will go from one to the other to save  $2\frac{1}{2}$  to 5 cents a yard, and the business, therefore, is keenly competitive, and the goods are sold on the narrowest of margins. In my opinion there is nothing manufactured in America that is sold on a narrower margin of profit. And nobody knows that better than Mr. Walker himself. He is in the woolen manufacturing business, and he knows how keenly competitive that business is, and he knows that nobody is getting away with murder on the price of any shoddy fabrics or any other fabric in the clothing business and stay in the business very long. (Hearings, pp. 220-244.)

IF BILL IS PASSED, LOW-GRADE WOOL WOULD BE USED.

MR. A. L. GIFFORD, Selling Agent for the Worumbo Manufacturing Co. If the French-Capper bill were to become a law it is my belief that the most noteworthy result would be a prompt increase in the production of fabrics made from low-grade virgin wool, owing to the fact that the labels on such materials would be the same as that on fine-quality goods made by such mills as the one I represent, although the actual difference in value would probably range from two to five dollars per yard.

On many of the fabrics made by the Worumbo Mills, which I represent, practically our only competitor is the European manufacturer. The French-Capper bill would exercise no control over the foreign manufacturer who desires to evade its provisions. The foreign manufacturer may declare his product to be 100 per cent virgin wool. After delivery has been made in this country Government agents may question the quality of the delivery; but if the American agent could show a statement from the foreign manufacturer to the effect that the shipment was 100 per cent virgin wool the Government would be powerless to proceed. Furthermore, even if the material did contain shoddy, it would be impossible to prove it. As I stated at the outset, I am not a woolen manufacturer, but it is my belief that if you wish to know accurately how much shoddy there is in a piece of woolen goods the only sure way to determine it is to see it put into the goods at the mill. (Hearings, pp. 302-307.)

MR. FREDERICK W. TIPPER, of New York, Selling Agent for woolen mills. Fashion in clothes causes a demand for a great variety of patterns and fabrics, but as far as possible, manufacturers of woollens standardize their goods so that the trade knows each season what a fabric is without having to experiment with it.

In the manufacture of these various cloths from wool many factors must be taken into consideration. The principal of these are: (1) Raw materials, (2) the structure, (3) the finish.

No matter how good the raw materials used, whether they are classified as "virgin wool" or "shoddy," unless the other factors mentioned are carried out correctly, an unserviceable fabric will result.

When the Quartermaster's Department required fabrics for suits and overcoatings for the soldiers in the World War, the woolen manufacturers were not allowed simply to make up an O. D. suiting

of 100 per cent virgin wool or an overcoating made with the required percentages of virgin wool and shoddy. If this had been allowed, the army would have been clothed in a hundred different fabrics and each one of varying strength, appearance, and wearing qualities.

To the contrary, every detail was laid out in the specifications—the quality of wool, the number of threads, the size of threads, and the finish were all specifically stated. Even under these conditions it is well known that some mills turned out much better fabrics than others.

#### PROPOSED LAW WOULD CAUSE MISREPRESENTATION.

It is our conviction that if the provisions of the so-called truth-in-fabric bill became law, the stamping of the fabrics with the percentages of unscientifically classified “fibers” would not only fail to give the consumer any idea of value but would actually cause misrepresentation.

The misleading ideas which would be conveyed to the consumer under the provisions of the proposed bill can be readily seen by the comparison of a few of the fabrics which are on the market at the present time.

I wish to present to the committee at this time a sheet containing samples of cloth.

Sheet A shows five men’s suiting fabrics, all of which would be marked “100 per cent virgin wool.” The difference in the cost of raw materials and of manufacture is so great that the price of the goods varies from approximately \$1.80 to over \$4 per yard, and it will readily be seen that the appearance and quality vary in the same way; the marking, therefore, would give no guide to their value. Sample No. 1 is sold and widely advertised as “virgin” wool, by the only manufacturer to our knowledge who so advertises. It is, no doubt, made of virgin wool, and it is good advertising to say so. The stamping of goods by law is, however, a very different matter from advertising. If it is “the right of the consumer to know,” it should also be stated that it is made of low-grade wool with very coarse yarns and has very few threads to the inch. In other words, its structure is very cheap.

There are hundreds of new wool fabrics made in this country, long established on the market, and for which no special claims are made, that are vastly superior in every way and other samples on this sheet show a few illustrations.

The conversion costs from the raw material to the finished cloth of sample No. 5 must be approximately three times as much as sample No. 1.

#### BRANDING WOULD GIVE NO GUIDE OF VALUE TO THE PURCHASER.

It is not “Truth in fabric” to label all these goods alike—it is only part of the truth, and a very small part. On this ground alone we believe the bill should not be enacted into law, as the only one to benefit would be the manufacturer of the cheaper grades of new wool goods, and the consumer could have no possible guide to their value by this marking.

I might say here, Senator, that I purposely did not include the very cheapest of the new wool fabrics on that sheet.

Similarly, on sheet AA, I show a few ladies' dress goods fabrics, to which the same general conditions apply.

SENATOR FERNALD. These are all wool, are they?

MR. TIPPER. Yes; they are all new wool.

SENATOR FERNALD. Could you tell that they were all virgin wool if you did not have a statement from the manufacturer?

MR. TIPPER. Some of them; yes. These three (indicating samples) are worsteds, and we all know in the business that worsteds cannot be made except out of new wool. The process is such that it cannot be done. These other three (exhibiting three other samples) are worsteds made in the same way. The other two fabrics we could only judge, and not be quite sure of, because it would be possible to use some grade of material which would be classified as shoddy under the proposed bill, which might give just the same appearance, and it would be impossible to detect it.

Sheet B shows two fabrics, B-1 and B-2. Both of these would be marked as containing shoddy, but the shoddy content is not a real guide to the value. B-2 is very much finer, has more threads, and is in every way a better cloth than B-1. . . .

SENATOR FERNALD. How do you know there is shoddy in these?

MR. TIPPER. Because the manufacturer told me so.

SENATOR FERNALD. That is the only way you could determine?

MR. TIPPER. Well, it is the only way I could be sure.

B-3 is 100 per cent virgin wool, whereas B-4 contains shoddy. B-4 has been made by the same mill for a number of years, has given satisfactory service, and for the average man (who does not have a number of suits of clothes) is a much more satisfactory fabric. Incidentally, it costs more and sells for more money than B-3. Here, again, a statement of the raw-material content is no index of value.

Sheet C shows two overcoatings. Sample C-1 contains less shoddy than sample C-2, but cannot give nearly such good service. Due to the same conditions, that the structure and the finish have more bearing than the raw material. It is interesting to note that a clothing manufacturer, before putting sample C-2 in his line, had his chauffeur wear an overcoat made from this fabric throughout last winter, in order to test out the wearing quality of the fabric, and found it stood the hard test excellently.

Sheet D shows the comparison between overcoatings which would be stamped "virgin wool" and fabrics which would be stamped with percentages of shoddy. D-1 and D-2 are virgin wool and sell at \$3 and over \$5, respectively; D-3 and D-4 contain shoddy; both of these latter samples sell at less money than D-1 and less than half the price of D-2. In spite of the lower prices, there can be no question as to the relative wear of the fabrics shown; D-3 and D-4 will undoubtedly give better service.

RAW MATERIAL STATES ONLY PART AND A MISLEADING PART OF THE STORY.

In these cases, also, raw material states only a part of the story and what can be a very misleading part. The raw materials used for

all the samples on this sheet are good materials and can be made into serviceable fabrics or unserviceable fabrics—it is the structure and finish which have a much greater bearing on the wearing quality than the raw material.

It has also been emphatically stated by the principal supporters of the proposed bill that manufacturers use shoddy in their goods in order to deceive the public and obtain the price of virgin wool.

Sheet E shows samples E-1 and E-2, made by different manufacturers, but sold by the same selling agent. E-1 which contains shoddy is sold at 60 cents per yard below E-2. In the same way, E-3 is made of new wool, and E-4 contains a percentage of mill waste which would be marked shoddy. E-4 is sold about 40 cents per yard below E-3 and we believe will give practically the same service. The manufacturers of E-1 and E-4 are not deceiving the public—they are giving good, serviceable merchandise at a low price.

Sheet F shows two samples of kerseys. Kersey is a trade name for a staple overcoating fabric that has been made for many, many years. Sometimes it is not worn as much as at other times on account of fashion, but it is a standard fabric just the same as a cotton duck.

Sheet F shows two samples of kerseys which are used for men's overcoats and both of which have been on the market for over 20 years, and have proven reliable and serviceable fabrics. F-1 is of new wool and sells at more than twice the price of F-2, which contains shoddy. No fabric like F-2 can keep its place on the market year after year without proving its value, and it is our belief that should the consumer see an overcoat made from this material labeled part shoddy, he would not believe that it was made from the same cloth as the overcoat he had bought in previous years; would be deceived as to its value and might easily buy a garment marked virgin wool which would be offered at the same price, or higher price, and might be distinctly inferior in value.

The samples shown are collected from fabrics now in the market. Every one of them is made by mills well known to the trade, and these samples could be multiplied ad lib., but we believe that they are sufficient to convince you of the impossibility of trying to convey any idea of value or wearing qualities by simply stating the percentages of raw materials, arbitrarily divided into two classes, one of which would be judged by the consumer as good and the other as bad.

"Truth in fabric" means much more than a statement of raw-material content, and to set up standards according to the provisions of the proposed bill is entirely contrary to a true grading of fabric values.

If such a bill were enacted into law, it would cost a large sum of money each year to enforce, with no return to the public except information which is so small a factor in determining value and service that it is worthless. (Hearings, pp. 363-366.)

MR. A. A. WHITMAN, New York City, of the William Whitman Co., said: It is perfectly evident from the comments which have appeared in the press, and particularly from the statements made by the chief advocates of the so-called truth-in-fabric law, that there is a very widespread misunderstanding of the fundamental



facts of cloth weaving and a surprising general ignorance of many of the simplest details of that trade.

The very word around which so much of the present agitation centers is perhaps the best illustration of this. "Shoddy," as the word is used in popular language, is a term of reproach, this definition having been fastened upon it at the time of the Civil War, when unscrupulous war profiteers palmed off upon the Government for the use of our soldiers cloths of very poor quality, poorly made, and of low-grade fibers, both of virgin wool and mill waste, which is also virgin wool, and of recovered wool or shoddy. To the mill man, however, shoddy takes its place as one of the very important raw materials available, according to its grading of fine or coarse, strong or weak, soft or harsh, and so on, for working into cloth in order to produce some desired result of finish, strength, warmth, cost, etc., in just the same way that the various grades of new wool are used to produce the results for which they are suitable. To the manufacturer or merchant such statements as these seem elementary in the extreme, but unless these terms are clearly understood it is evident that manufacturers and laymen are apt to discover that they are speaking different languages, and misunderstandings are inevitable.

The word "shoddy" in the woolen trade has a technical meaning and is a technical expression and is understood to mean nothing more nor less than pure wool reworked from old cloth or wool which has been spun or woven. To the lay mind it means something unworthy. If you were to ask almost anyone what they think of when they say "shoddy" they will say that they think of all sorts of unworthy goods. Many people think it means cotton. Many people think that it is material that is picked from the gutter, and all that sort of thing. That is distinctly the layman's understanding of the word. It is just as different technically as can be. I would like to read section 14:

That the term "virgin wool" as used in this act shall mean wool that has never previously been spun or woven into cloth; the term "shoddy" shall include any material obtained from any fabric or clippings of cloth of any fiber whatever, or secured from rags or from used apparel of any description, or any fiber that has been previously spun or woven into cloth, as well as wood, hemp, jute, flax, and hair fiber not properly classed as wool, of any description and from whatever source obtained; also fur, feathers of every description and from whatever source obtained.

#### AN ATTEMPT TO LEGISLATE DEFINITION OF SHODDY.

That means that we are going to legislate a definition for "shoddy," which will bring about the meaning as used in the vernacular, a term that has no application whatsoever to the trade; a term which is unknown to the trade. It is a definition that completely changes the proper meaning of the word. It is quite evident that we have been talking without quite sufficient reference to that distinction. We have been speaking of shoddy here as wool. Now, if you are going to mark clothes, give the percentage of new wool, the percentage of cotton, the percentage of shoddy, and the percentage of

silk, you have left out altogether the component of "pure-wool shoddy," which has not been marked; that has not been taken care of at all.

The proposed bill undoubtedly makes its appeal for support on the claim by its authors that shoddy, which they assume to be inferior to new wool, is used at all times by manufacturers of wool textiles as a substitute for new wool, in order to cheapen its cost while enabling him to deceive his customer into the belief that the fabric is made entirely of new wool, and so, fraudulently obtain a higher price for it than the customer would pay if he knew that it contained shoddy.

In making this play for popular support of their bill, the National Sheep and Wool Bureau have undoubtedly very cleverly counted on the ignorance of the public, and to strengthen this support have not hesitated to still further fasten on the public's mind the fallacy, that, because of its virginity, wool is necessarily good and cloth made from it is good and because the fiber has been previously spun or woven, the cloth in which it is used is necessarily of low quality. To at once see how false this statement is, it is only necessary to know the barest facts about new wool. Certainly anyone who knows anything about the subject knows that various breeds of sheep yield wool varying in quality to extremes of fineness, strength, length of staple, and so forth, and even from individual sheep, wool is obtained running all the way from the best fibers, taken from the sides and shoulders, to the poorer qualities from belly, throat, and head, and even the short coarse product of the legs and the knotted and dung-filled tags, known as locks. All these qualities are virgin wool under the Capper bill; and in addition to these is the so-called "pulled" wool, taken from the skin of dead sheep, which is frequently so weak as to be of very little serviceability. In fact, every kind of wool waste, even the sweepings from the factory floor, are classed as virgin wool, so long as they have not actually been spun into yarn or woven into cloth. Every grade of wool, however, retains its original characteristics of qualities when it is spun and woven into cloth.

The greatest skill and ingenuity have been brought to the problem of recovering these fibers from the woven and knitted fabrics, and in spite of the fact that they are broken into short lengths and, if the cloth has been subjected to wear, have lost some of their strength, they are still wool and have the same characteristic of fineness that they originally had. This reclaimed fiber is the shoddy of the woolen trade. . . .

#### GOOD CONSTRUCTION DEPENDS UPON SPINNING AND WEAVING.

Reference has repeatedly been made in the discussion of these bills to the necessity of considering the construction of the cloth as an even more important element in quality than the fiber used. The word "construction" is another one of those terms glibly used by manufacturers and merchants, but apt to be entirely misunderstood by the layman. It refers to the way the yarn is spun and to the way it is used in weaving the cloth. If the wool is twisted loosely the fibers are not bound firmly together, and while the yarn in that ease



is soft and suitable for certain purposes, it has not a great deal of strength. If you will unravel a thread of warp or filling from any piece of wool cloth you will readily prove this by twisting it tightly or untwisting it and testing its strength. You will also notice as you untwist it between your fingers that it is made up of one, two, three, or even more strands, each twisted to a certain tightness to produce just the result desired in the finished cloth. In weaving these threads together the greatest skill is required to achieve just the effect desired in the finished material. A large number of strands to the inch each way will produce one effect, while fewer strands to the inch will produce another. A large range of results of strength, warmth, appearance, durability, etc., may thus be obtained by the use of the very same fiber to start with, and it is evident that by naming that particular kind or grade of fiber it would be impossible to tell what kind of cloth would be produced.

The Government Army specifications for material for soldiers' uniforms went into elaborate detail as to the quality of wool, twist and ply of the yarn, construction of the cloth, etc., seeking to give each manufacturer the same receipt for the cloth required. but, even so, the production of some mills was far better than others, and some manufacturers had their deliveries refused altogether. What guide would the manufacturers have had if these specifications had merely stated the amount or percentage of new wool or shoddy to be used? Absolutely none. . . .

#### INTENTION IS TO CREATE PREJUDICE AGAINST SHODDY.

The advocates of this legislation constantly refer to cloth made of old dirty rags reworked often as many as eight times. Nothing can show more clearly the intention to create a prejudice against this useful material. The recovered wool is graded in the most exacting way, just as new wool is, and is bought by the manufacturer with careful discrimination as to the quality and grade which will produce the particular result he desires. In the *Daily Mill Stock Reporter* may be found every day quotations for from thirty to forty grades and qualities of reworked wool. . . .

If it is possible to recover the fiber as often as eight times, it is most unlikely that it could be spun at all, and it could probably be used only for felt packing, linings for cheap rubber boots, weather strips, and similar products. . . .

If the Capper bill is enacted and the unwarranted stigma is placed on shoddy, the purchaser will, by his ignorant prejudice, be led to pay a higher price for cloth not so good, or to choose a cloth of less worth for the same price. It is no argument to say that the consumer will become educated to the value of shoddy and will learn to select it with proper regard for its value. In spite of the widespread knowledge we have today as to the merits of oleomargarine, it is doubtful whether a rush of guests could be secured by a hotel advertising that oleomargarine is used in its kitchen. It would probably not prove good advertising for a restaurant to announce that it serves only beet sugar to its patrons, even though they may know that sugar from the beet and sugar from the cane are identical in every respect.

There is one phase of the carrying out of this law that seems to us to present very great difficulties, and that is the enforcement of the proper stamping of foreign goods. While it is a very simple matter to determine the percentage of cotton or silk in a given fabric, it is not possible to determine by analysis or otherwise the presence of shoddy. As there can be no way of inspecting the processes used in the production of these foreign goods, there is a possibility of the actual contents of the fabrics differing very materially from the marking attached, and even in a case where obviously the goods are not as marked, still the deception could not be proven. (Hearings, pp. 245-254.)

#### SIX HUNDRED AND FORTY DIFFERENT KINDS OF WOOL.

MR. CHARLES J. WEBB (wool manufacturer and wool merchant of Philadelphia). When I was down here before this committee the other day, I made a few statements about 640 different kinds of wool, and I said that the question of virgin wool meant nothing. I have brought a few samples of wool with me here to-day, taken from samples that are standard for the United States Government.

Here is a sample of wool that comes from India—virgin wool, known to the trade as "Marwar" (exhibiting sample).

Now, here is one from Madras (exhibiting another sample of wool). All these wools were subject to duty when we had the duty on wool.

Here is wool that comes from Turkey. We buy that, picker it up, and put it in the back of goods, because it is cheaper than shoddy. That is the wool which they gather up from Bagdad and different sections of the country, put it in a mattress, and lie on it for years, and then when they rip the mattress up they take it out and sell it.

Now, here is another sample of wool (exhibiting sample). This comes from Russia—Calmuc wool.

I only want to say to you that those are virgin wools, if you please. In other words, I told you the other day that the words "virgin wool" mean little to the man who does know and does understand his business, but to the man that does not know, wool is wool. But when you talk to the man who knows this business you must tell him all about this wool. You must tell him what it spins; you must tell him what are the shrinking qualities of this wool, and what are the classifications. Wool is just like an individual. Every fleece is different.

I brought you these samples of wool, gentlemen, so that you can see what virgin wool is. I can make you a piece of goods out of these samples very handily. And the goods made out of this wool will be stamped "virgin wool." But I can also make you a piece of goods out of good by-products, and you could not tell that that piece of goods was not virgin wool. But the minute you would look at a piece of goods made from these samples of wool (exhibiting samples of East Indian and Turkish wool) you would know something was wrong. And the whole situation resolves itself into this, and this is the error that arises from the whole situation, and the fact is that the average man who is not in the business thinks

that wool is wool, and does not know that there are 640 different types of wool. There is the whole story.

Now, there are some wastes that are better than wool for some purposes. For making certain kinds of cloths broken tops are better than wool, because it has no nubs in it, no second growth, no second clip.

Now, it is all in the manufacture of woolen goods. One man will take the same material that another man would take in manufacturing cloth and make a piece of goods that you and I would not buy. And then another man will take the same material and put the picks in it and the ends in it, and in the finishing of the goods he will go through a great many processes and it is the finish that makes the goods, as the gentleman described here.

Now, I have spoken to some of my wool growing friends—I don't know whether there are any of them here to-day or not—and I have said to them that my interest is their interest, and their interest is my interest. I have quite as much money locked up in wool-growing as they have, and maybe I have more, because I think I am holding the bag to-day; and what is the use of spending your time and everybody's time passing a law concerning which they would say, if they really knew all the facts in the case, "Don't pass it?" I am so confident of that that I am almost willing to try to convince them, if they will give me twenty minutes to do so. (Hearings, pp. 366-370.)

## WITNESSES FOR THE CAPPER BRANDING BILL.

## NON-EXPERTS TESTIFY ON INTRICATE AND TECHNICAL MANUFACTURING PROBLEMS.

At the hearings given on the Capper compulsory branding bill (S. 799) by the Senate sub-committee of the Committee on Interstate Commerce, fifty-two witnesses appeared to give testimony for and against the bill. Of these, thirty-one appeared for the bill and of this number no fewer than thirteen appeared more than a year ago at the hearings before the House Committee on Interstate and Foreign Commerce. These were Alexander Walker, president of the National Sheep and Wool Bureau of America; Gray Silver, Washington representative of the American Farm Bureau Federation; Dwight Lincoln, secretary and director of legislation of the Farmers' National Council; E. L. Moody of the New York State Federation of County Sheep Growers' Co-operative Association; Thomas C. Atkeson, representing the National Grange; Charles A. Lyman, secretary of the National Board of Farm Organizations; George M. Wilber, chairman of the Executive Committee of the Ohio Wool Growers Association and member of the Board of Governors of the National Sheep and Wool Bureau; J. F. Walker, president of the American Delaine and Merino Record Association, chairman of the wool committee of the American Farm Bureau Association, field manager of the Ohio Wool Growers Association, and member of the Board of Governors of the National Sheep and Wool Bureau; Trowbridge Marsten, representing the Kaumagraph Company of New York and Parks and Woolson Machine Company of Springfield, Vermont; Representative Burton L. French of Idaho, and George D. Briggs, chairman of the legislative committee of the National Sheep and Wool Bureau, member of the Board of Governors of the National Sheep and Wool Bureau, and advertising manager for Strong, Hewat & Company.

Of the witnesses appearing for the bill, W. W. Reynolds, Senator Gooding, Frank W. Mish, E. L. Moody, J. B. Wilson, J. N. McDowell, Dwight Lincoln, George M. Wilber, and J. F. Walker are or have been wool growers and Senator Gooding and Representative French represent a state where the sheep interests strongly predominate.

Many others represented organizations whose members wished to see their financial interests helped by the legislation demanded. The support of others can be attributed to other motives which will appear as portions of their testimony are quoted. Many expressed a desire not to be understood as experts discussing technical problems of wool manufacture. We reproduce some of the gems of testimony given to the sub-committee by the witnesses responding to urgent requests to be present from the National Sheep and Wool Bureau, whose chief officers are men connected with the corporation which has used the propaganda as a "good paying proposition" as its advertising director, George D. Briggs, is said to have called it.

Senator Capper of Kansas, whose state does not have within its borders a wool mill of any size, made the opening speech for the bill. He did not discuss the technical features of the bill because, desiring to conserve the time of the committee, these "and the related facts and problems pertaining to the bill" had been taken up in detail at the hearings before the House Committee on Interstate and Foreign Commerce by Representative French, also hailing from a state with no woolen or worsted mill within its confines. Senator Capper declared with absolute confidence that "every principle upon which the provisions of the bill is based has been tried and proved practical." To prove beyond peradventure of a doubt that "to stamp wool woven fabrics is eminently practical" he cited as unbiased the testimony of the representative of the companies who would furnish the machines to do the work! Though he had "not heard them all" Senator Capper declared that "It is obvious that there is not a single alleged objection that opponents have raised against the provisions of the truth-in-fabric bill that are supported by any legitimate reason." To convince the committee that the use of unidentified shoddy is destroying the sheep industry and bringing the sheepmen to beggary Senator Capper produced unsupported declarations to that effect made by four wool growers; and with the presentation of their declarations, he retired after asking the committee to call Mr. Walker, "who is president of the National Sheep and Wool Growers Association of America and who I think can give you the fullest information on the subject." The accuracy of Senator Capper's information is disclosed by that designation of Alexander Walker. And a reading of his speech leaves the impression of a man being coached in one evening on technical matters which most persons absorb only after years of study and experience.

#### ALEXANDER WALKER USES VIVID METAPHORS ABOUT SHODDY.

Mr. Walker read into the record a partial list of the organizations which, in response to the propaganda put out by the Bureau, had adopted resolutions favoring the bill and quotations from ready-made editorials furnished newspapers by the Secretary of the Bureau. Asserting without offering supporting evidence that "it is unidentified shoddy counterfeiting virgin wool that is sapping the life-blood of sheep husbandry," and "unidentified shoddy, which now counterfeits virgin wool, . . . is the wolf that is destroying not only the lambs but also the sheep," Mr. Walker submitted to the committee, "that to permit sheep husbandry in the United States to be wiped out of existence, . . . and to permit the United States to become dependent on the outside world for her wool, would entail not only a tremendous economic loss but would inevitably result, especially in the event of war, in placing the United States in a position of grave peril." Even with "a tariff, no matter how high the tariff," Mr. Walker assured the committee that there "can be no assurance of safety and justice for the wool grower until the French bill is placed on the statute books." He put into the record the pamphlet entitled "Objections to the French Capper Truth in



Fabrie Bill Answered," issued by the National Sheep and Wool Bureau, of which he is president, and ventured to instruct the committee on the use of shoddy in worsteds, which we discuss on another page of this issue, after which he made way for Mr. W. W. Reynolds, a sheep raiser of Licking County, Ohio.

Mr. Reynolds is the man who enjoys saying that "shoddy has killed more sheep than all other causes." After he had repeated this absurd dictum he amplified it somewhat by asserting that "substitutes for wool have been and are wrecking the sheep industry of America," adding, "if I cannot prove it you will know it." Mr. Reynolds also gravely told the committee that "shoddy is worth as much as wool is" and "there is such a demand for rags that hardly any one wants wool," although almost at the very moment he was testifying to that effect the July *Sheep Breeder* was announcing on its editorial page that "the Michigan and Fargo pools have sold the majority of the 1920 wools and the Ohio pool for 1920 has been completely sold. The Illinois and Wisconsin have been completely liquidated. Approximately 12,000,000 pounds have moved from our Chicago pool since January, 1921." The latter date is about the time when the wool manufacture began to show signs of renewed activity. If, as Mr. Reynolds contends, shoddy is the arch enemy it seems strange, indeed, that the wool pools were completely liquidated in an industry so terribly dead.

Mr. Reynolds claimed that "shoddy is not wool any more than coal ashes is coal, than the crusts of bread are wheat." Although his associate, Mr. Alexander Walker, is on record as having written that, "there are no tests known to science whereby the presence of all wool shoddy surely can be detected in a fabric," he also gravely testified that "there are none but the young and thoughtless and some few ladies that wear wool; all the balance are wearing shoddy or wearing old clothes." (Hearings, pp. 52, 56.)

Harry Fisher, a merchant tailor of Washington, wanted the bill passed because of the quality of the "clothing that you have seen during the period of the war." He said that "it is a fact, if a man is used to it he can tell it [virgin wool], but the virgin wool and the mixture you cannot always tell. We have goods today that we buy which are stamped pure wool, and they may contain wool, but as the gentleman says, they are made of short wools that do not hold together. They are made of shoddy. They are made of rags." (Hearings, pp. 60, 61.)

Mere shortness is not a sure test of shoddy, and the statement marks Mr. Fisher as an incompetent witness. In the quotation given the witness unwittingly admitted what the opponents of the bill say will be the situation if the bill should be enacted, that fabrics would be labeled "all virgin wool" and they would be made out of short wools that according to Mr. Fisher, "do not hold together." If so, how would the unsuspecting purchaser relying on the Government's hall mark, be benefited? Mr. Fisher had information vouchsafed to but few about the clothing issued to our army, that "when you look at our army that went overseas and see the clothes those boys had on their backs, it was a shame. They weighed a ton on their backs, but there was little warmth to them. It was the



cheapest stuff that could be produced and at a price which was fabulous." (Hearings, p. 61.)

Mr. E. H. Snyder, a merchant tailor of Washington, D. C., placed a few years ago with an importing house an invoice for foreign woollens. From an analysis made by the Bureau of Standards he discovered that the cloth contained 9 per cent cotton, while the analysis of the chemist chosen by the importer showed that the samples were all wool, and "that is the reason I think this bill should be passed," he said. He wished "some bill to compel the manufacturers to place a brand on their goods and tell us what it is composed of, whether it is all wool or part cotton"! (Hearings, pp. 62, 64.)

#### WHY THE DYERS AND CLEANERS FAVOR THE BILL.

Mr. Tom Endicott of Atlantic City, president of the International Association of Dyers and Cleaners, showed the altruistic character of his interest in the bill by telling the committee he believed the 200,000 cleaners and dyers "would shrink to 50,000 or 100,000 if there were more truth in fabric and that it would make our business a heaven." (Hearings, p. 65.) But Mr. Endicott, who had not been well primed by his mentors, hastened to add: "I am not speaking of shoddy. Shoddy does not interest us so much; it is this cotton, sir."

James Carville, vice-president of A. F. Bornot & Bro. Co. of Philadelphia, dyers and cleaners, not realizing that reworked wool is not vegetable matter, ventured upon a field in which he displayed his ignorance when he testified that in dyeing, "one garment would be perfect composed of virgin wool: and we would be able to give it that velvet gloss. There are other garments that look more like a piece of flannel than like broadcloth on account of being filled with shoddy, short nap—a dry, destroyed wool"! (Hearings, p. 66.)

Dr. Harry E. Mechling, chairman of the legislative committee of the International Association of Dyers and Cleaners, of Louisville, Kentucky, waved his arms and testified that khaki is made of cotton and that the reason General Pershing had to buy woolen clothing from the Eastern Governments was "our cloth could not keep our boys warm. It was not heavy enough," [though a former witness, Mr. Fisher, had testified "they weighed a ton on their backs"] "to be worn by the boys in the trenches." Mr. Mechling often displayed his ignorance of wool manufacture, but nowhere more surely than when he told the committee about "the carpets which are made from the short fiber of the so-called shoddy" and the "carpet which is made from the long staple, so-called virgin wool." He gravely told the committee that "there is paper in our suits today. There is seaweed in our suits today." Mr. Mechling's complaint was also founded on results obtained, according to his testimony, in dyeing garments used in clothing German prisoners; the "inside portion of several took a black green dye and the outside took a beautiful green, due to the presence of cotton." (Hearings, pp. 72, 73, 75.)

Mr. J. R. Howard, president of the American Farm Bureau Fed-

eration, who, confessing that "the matter of administration of this law is one on which he was not informed" declared "It would be just as easy to say that this contains 25 per cent of shoddy and 25 per cent of cotton and a certain proportion of virgin wool as it would to give it any other label or trade mark." He, too, raised the specter of destruction of sheep husbandry when he said, "If the sheep industry is to be maintained on the farms and ranches of America it must have protection and that protection must come in a proper use and labeling of fabrics as well as in a protective tariff;" and he committed unqualifiedly the Farm Bureau "with its almost one and one half million members" to this truth in fabric bill because "we believe that it is essential in the maintaining and rehabilitation of the sheep industry." (Hearings, pp. 81, 83.)

#### MR. ROGERS GRABS AT EVERY STRAW.

J. A. Rogers, president of the South Dakota Sheep and Wool Growers Association, not aware of the depression long existing in the reworked wool industry, told the committee that "certain textile mills are creating an active demand for woolen rags while our virgin wool remains in the warehouses unsold," and that "since the sheepmen and the sheep industry of our plains States are not going to be ruined, but are already ruined and since we have lost both heart and purse and are grabbing at every straw to try to get back before every spark is gone, they had concluded that the truth in fabric bill will increase the consumption of virgin wool and make the price of a suit of clothes become an index to its value once more."

Senator Gooding, producing some cloth which he testified "is manufactured in a Michigan mill from wool grown by a wool grower in Montana," declared that "there is not any question about it being a simple matter to properly stamp these goods," though Senator Gooding is not familiar with the problems the wool manufacturer meets and with which he must deal.

Mr. Gray Silver, Washington representative of the American Farm Bureau Federation, repeated time-worn phrases about the decrease of sheep numbers, assigning as one of the reasons therefor "the rapid increase in the use of shoddy and its sale in place of virgin wool," a statement which he did not prove. He said "we wish to see woolen goods so branded that we will be able to differentiate between good and inferior garments, to be able to tell easily the amount of shoddy, cotton, silk or combinations in the fabric offered for sale."

Even Charles W. Holman, manager and acting secretary of the National Milk Producers Association, was called to swell the number of organizations demanding the enactment of the bill. He confided to the committee that the bill "is in line with the general program of legislation which our member organizations are seeking." (Hearings, p. 98.)

Mr. Frank W. Mish, a rich gentleman farmer and a Maryland Democrat from Hagerstown, based his request for the enactment of the bill on the condition of the farmers, saying that "the wool growers are in bad financial condition." (Hearings, p. 101.)

Mr. Dwight Lincoln, secretary of the American Rambouillet Sheep Breeders Association, testified that "we do not feel that we are asking any special privileges. We are simply asking a chance to do business on our merits." He also said that "the conditions in the sheep industry in the West are very bad" and expressed the opinion, as he had done to the House Committee last year, that the bill, if enacted, "would stimulate, in fact stabilize the sheep industry." (Hearings, pp. 103-104.)

#### THE STUFF THAT DREAMS ARE MADE OF.

Mr. J. N. McDowell, a wool grower from Washington County, Pa., gave as the basis for his demand for the Capper bill that "the price is gone not only on the sheep, but on the wool, and they have their wool yet [June 1, 1921]. They were looking for 90 cents a pound for their wool, and they have their wool on hand and they cannot get anything for it and so it has placed them in a bad situation with all these buildings and equipment not paid for. And so we think we have been somewhat wronged. We feel that there was an attempt at the time of the war to hurry up production of cloth and there was a big demand and a raising in the price of rags, while wool could be had, but the rags were used and the wool was kept back." Mr. McDowell thought "that while all the manufacturers may not be profiteers they saw a good chance to make more money by working up rags than to work up the raw wool and the wool grower suffered." This condition he thought would continue; "that they would work the rags in and leave the wool with us people."

Certainly the kind of stuff that dreams are made of and yet solemnly advanced to a senatorial committee as reasons for passing a compulsory wool textile branding bill!

Mr. McDowell was frank enough to admit that "cattle have fallen just about one half," or "about the same proportion as the sheep," and he ventured the opinion that "I think we could make a very nice living out of 50 cent wool"—for the common grades of wool, he meant. (Hearings, pp. 106, 108.)

Mr. Benjamin C. Marsh, secretary and director of Legislation of the Farmers National Council, followed Mr. McDowell. Mr. Marsh is the same man who appeared before the Senate Finance Committee on May 19 at the tax bill hearings when he told Senator Smoot that he also represented the People's Reconstruction League, whereupon Senator Smoot exclaimed, "Oh, you're just one of those that farm the farmers." Mr. Marsh admitted the bill is "rather complicated in some details as to administration", but he did not consider that "a vital question." Appearing "perfectly clear" to him, he knew he was "speaking for the farmers who are members of the organizations affiliated in the Farmers National Council—that legislation of this character is necessary." He explained that the Council "is a special union of state and national organizations to carry out a specific legislation program here in Washington," their object being "to try and get agriculture on a sound basis, and we feel that this measure would be a help in getting agriculture on a more sound basis."

## THE REASON FOR DR. SPILLMAN'S PRESENCE.

Dr. W. J. Spillman, associate editor of *The Farm Journal*, of Philadelphia, explained his disinterested presence before the committee by saying that "in talking the other day with Mr. Briggs and Mr. Greene of the National Sheep and Wool Bureau, I was giving them my point of view on this bill and they suggested that I should come here. . . . That is the reason I am here." Dr. Spillman later admitted that "the reason he was taking the trouble to come to Washington was because 'I want to see the price of wool increased to the farmer.'" (Hearings, pp. 116, 119.)

Dr. Genevieve Tucker of Davenport, Iowa, presented a resolution passed by the Women's Club of Davenport which endorsed "this bill which gives the general public valuable information regarding yarns, clothes, and garments"! Dr. Tucker assured the committee that "a resolution passed by the club means that it has been given full investigation and consideration by the standing committee on resolutions," although it does not appear that the wool manufacturers' side of the question or the clothing manufacturers' objections to the bill were given "full consideration by the committee." (Hearings, p. 125.)

There is hardly anything so cheap as resolutions, and this one proves the truth of that adage.

Dr. Tucker showed her unfamiliarity with wool manufacture when, testifying the second time, she assured the committee that "we all know that the objection to many clothes is that they do not wear out, but they look so rusty that they won't wear out" . . . "You all know," she said, "that you hate a blue serge suit that looks so shiny," although shininess is an inescapable accompaniment of a serge cloth, owing to the method of manufacture, and an inevitable result of service! (Hearings, p. 479.)

Mr. E. L. Moody of the New York State Federation of County Sheep Growers Co-operative Association exhibited a blanket made from New York grown wool and admitted that "every so often we get a slump in the sheep business that is disastrous to all those connected with it," an admission that scarcely sustains the contention that "the use of unidentified shoddy is the wolf that is killing not only the lambs but the sheep." (Hearings, p. 131.)

Mr. Thomas C. Atkeson, representative of the National Grange, appeared to present a resolution passed by the Boston meeting of the Grange in 1920, endorsing the principle of the bill. He called attention to the fact that the "Capper-French" bill was not endorsed. (Hearings, p. 134.)

Mr. J. B. Wilson, secretary of the Wyoming Wool Growers Association, told of the unanimity with which the Legislature of his State passed a labeling law and of the demand for it there. (This unanimity is described in an editorial in this issue.) Though Mr. Wilson has had no wool manufacturing experience whatever he expressed the confident opinion that "the opponents of the measure are unduly alarmed both as to the difficulty of enforcement and the expense involved." Respecting the predicted increased cost to the consumer it was his opinion "that this is the sheerest nonsense." (Hearings,



p. 145.) Mr. Wilson touched upon "the poor wearing qualities of the clothing used in this country during the past three years" which he asserted, "is due entirely to the increased use of shoddy."

But when testifying before the House Committee a year earlier Mr. Wilson's father, Dr. J. M. Wilson, a former well-known member of the Wyoming Wool Growers Association and an earnest advocate of the French bill, when referring to the stocks of wool he had seen offered at the sales in Boston of Government wool on March 5, 1920, exclaimed, "And where in the name of God the Government got so much rotten wool I do not know. The wool was so rotten nobody wanted it. . . . It was bunk practically." If Dr. J. M. Wilson was right about the quality of the wool obtainable for civilian use, would not that explain to his son why "the fabrics we have had for the past three years have been vastly inferior to the fabrics of ten years ago," as Mr. J. B. Wilson testified they have been? (Hearings, p. 146.)

Mr. Charles A. Lyman, secretary of the National Board of Farm Organizations, testified that "there are two standpoints that we have. In the first place the general principle of truthful advertising, branding, labeling, etc., of which wearing apparel is a very important element. Then there is the second proposition that we believe the wool industry itself needs protection and that this particular bill here will be of very material benefit to the wool industry." (Hearings, p. 149.)

#### MR. WILBER'S DENUNCIATION OF OPPONENTS OF THE BILL.

Mr. George M. Wilber urged by his friends for Secretary of Agriculture, a member of the Governing Board of the Sheep and Wool Bureau, whose astounding misstatements about prices are noticed on another page, expressed his intense interest in the bill by asserting that "I'll be eternally damned if I would feel constrained to longer support a party which cannot see the justice of this bill for the protection of the clothes-wearing public and the salvation from utter ruin of the sheep and wool industry of America."

An unfounded statement made by Mr. Wilber was that "the woolen manufacturers are a powerful organization with plenty of means at their command, much of it made from the unrevealed presence of shoddy in the fabrics they have manufactured and sold to an unsuspecting public which they designated as pure wool," which, he said, means nothing, "as a fabric may be pure wool and yet not contain a single thread of virgin wool." He declared that "unscrupulous woolen manufacturers are driving us wool growers to manufacture our own cloth so we may know we are getting a reliable fabric." Painting a word picture of the "wool growers' dire distress and their already ruined financial condition" and declaring that he was "in nowise exaggerating" when he predicted "utter ruin to the sheep industry, placing America at the mercy of foreign wool unless heroic efforts will be taken to protect this most important industry," he asked that the sub-committee recommend the bill so that "the clothes-wearing public may have an opportunity to buy the kind of clothing they are entitled to" and that "the sheep industry of

America may be saved from utter ruin." (Hearings, pp. 153, 154, 155, 156.)

Mr. J. F. Walker, chairman of the Wool Committee of the American Farm Bureau Federation, who should have been more accurate in his language, testified that while he "was in a shoddy mill from which I got this fabric [since when did shoddy mills begin to make fabrics?] the gentleman I was talking with was called to the phone and when he came back he said I have just purchased 60,000 pounds of shoddy at 5 cents a pound," although other witnesses complained of the high prices being paid for shoddy which they asserted were equal to prices offered for wool. Mr. Walker wandered far afield by reading many extracts from the testimony before the Federal Trade Commission in a case relating to so-called merino underwear which had nothing whatsoever to do with the matter before the committee.

Mr. Trowbridge Marsten, representing machine builders who would furnish the machines to do the branding, could hardly be considered a disinterested party. He testified that a machine making the transfers had been in use about ten years, but when asked if extensively used, had to admit that "there are about 35 machines in operation today to apply their trade mark." When asked how many woolen mills now have these Kaumagraph attachments, Mr. Marsten replied: "I have never made a count of them, but I should say a dozen to fifteen mills. That is not an accurate count but is an estimate."

Representative Burton L. French of Idaho, who comes from a non-wool manufacturing state, and cannot be called an expert, told the committee on what lines the bill is modeled, saying: "From beginning to end with the exception of rewording the language, because of the commodities that we seek to deal with here, the language is almost identical with the language that is used in the insecticide act and in the pure food and drugs act." In one breath Mr. French told the committee that shoddy "is so hidden, gentlemen, it is so hidden by its process of manufacture that they themselves after the product shall have left the factory, cannot tell for sure oftentimes, unless by minutest tests whether it is shoddy or whether it is the virgin wool product that they are selling" and in another, that "there are not such tests, possibly that will warrant conviction. But there are such tests that would approximately tell." Pressed to say how the law could be enforced if, as the manufacturers and experts testified, it is not possible to tell accurately the approximate proportions, Mr. French had to admit what other witnesses denied is the intention of the framers of the bill that "I think there will be some way of getting at the facts. Some of the other laws that have to do with interstate trade provide that the books of a concern may be opened and examined, materials and properties inspected, and we will in that way finally determine whether or not concerns are violating the law." Asked what the purpose was in omitting knitted fabrics and limiting the application of the bill to woven fabrics, Mr. French declared that "personally I have no objection to including knitted goods," and after an attempt to avoid a frank, full answer, excused the omission by saying, "Well, we felt in presenting this



bill that the subject itself is so large and so comprehensive that we ought to limit ourselves to it alone." (Hearings, pp. 375, 378, 381, 384.)

#### A HUMBLE RETAILER'S CONCEALED CONNECTION.

Mr. Herman C. Ritter who described himself as "a humble retailer," but forgot to state that he is also a member of the Governing Board of the National Sheep and Wool Bureau, declared "I come to you free handed, without any obligation or without any promise by any one faction or the other." This was a queer statement to be made by a member of the organization pushing the bill for enactment. Mr. Ritter asked the committee to "help the farmer to put a propaganda over that will encourage the farmer in raising the right kind of wool and better wool and simply go on and get a market for it."

He expressed the wish that "there could be a law enacted to make every retailer in this country come down to a price that was a just and fair living price so that the man could be protected." His "idea is," he said, "simply this, that in my experience in handling merchandise I find that where you have a manipulation of life and death, as you have here, for it is practically a comparison between dead wool and live wool, the dead wool wears off and gets musty; it loses its luster; it wears through." But he also added that "it is all in the manufacture. One man can manufacture it into a beautiful piece of goods and another would make a rough garment out of it. It is a question of skill on the part of the manufacturer."

At this point Mr. J. F. Walker of Ohio read into the record a telegram from the Ohio Federation of Women's Clubs which stated that "after careful investigation and consideration" the Federation "at its annual convention unanimously passed a resolution indorsing the French-Capper truth in fabric bill. We understand the bill and ask its passage."

Here at least was a body that could easily master and understand all the technical problems of, and objections to, a bill attempting to regulate the manufacture of the most difficult raw material entering into finished products. It may be well to ask if the Federation heard the proponents and also the opponents of the bill or was their action secured after representations were made solely by the men in Ohio who are advocating the measure.

#### A COLORADO DEMOCRAT AGAINST "THOSE MANUFACTURERS."

Judge A. W. Rucker of Colorado, now being urged for appointment to the Interstate Commerce Commission, admitted that possibly he would not have been there had he not been on the legislative committee of the American National Stock Growers Association and the Colorado Stock Growers Association, although he had been "a continuous agitator of this movement for several years" and "occasioned the introduction of the resolution by our associations and also a memorial from the State of Colorado." Judge Rucker admitted he could not qualify here as an expert upon textiles and that "when this debacle came upon us this last May a year ago I had two years' clip of wool on hand and didn't know what to do with it." He

was sure he would not get any offer for this wool for two years because "my friend Wood and my friend Clark are not going to buy our wool because they have got the wool right there on the seaboard that comes from abroad." Judge Rucker predicted that when the Democrats come into power "we are going to line up against those manufacturers. . . . Looking at it from a strictly financial standpoint they do not care what becomes of the sheep men and it might be for that reason that they are opposed to this bill." (Hearings, pp. 414, 416, 417.)

Judge Rucker should read the history of the National Association of Wool Manufacturers, and he would soon see how unfounded and unfair his statement and insinuations are. Only the uninformed talk as Judge Rucker did in the paragraph we have quoted.

V. G. Warner of Iowa, Secretary of the Iowa Fleece Growers Association, vouchsafed some valuable information when he testified that "the farmers protest against being forced to use shoddy when the virgin wool is really cheaper than the old rags. Of course I am not acquainted with this textile manufacturing business" he said, "but we see the quotations on old rags in papers and they look like they are higher than our virgin wool." Mr. Warner should have recalled the testimony of Representative French who told the committee only a few minutes earlier that "the public ought to have the right to know whether it is shoddy, reworked material purchased by the manufacturer at 20 or 25 per cent of the price of virgin wool," before he declared the prices for old rags "look like they are higher than our virgin wool." Who is right—Mr. French or Mr. Warner, for both surely cannot be?

Taking his cue from Mr. Alexander Walker and Mr. George M. Wilber respecting the value of the tariff to the wool growers, Mr. Warner said that "a tariff on wool might help some but we think that the passage of the truth in fabric bill will do as much or even more than a tariff. We think that one of the greatest enemies of our sheep industry is the use of shoddy, hidden from the people so that they can not tell whether it is shoddy or virgin wool." Mr. Warner quoted the census figures for sheep in 1910 and those for 1920 and noting a decrease asked, What has been the cause of this? And with an air of finality, declared "It has been the use of shoddy." (Hearings, pp. 419, 420.)

#### MR. BRIGGS OFFERS HIS IDEAS ON MANY TROUBLESOME POINTS.

The last witness for the proponents was the redoubtable George D. Briggs, advertising manager for Strong, Hewat & Co. and member of the National Sheep and Wool Bureau. Appearing before the Senate Finance Committee in favor of the Emergency Tariff, Mr. Briggs told that Committee what he should also have told the sub-committee of the Senate Committee on Interstate Commerce, "I would not for a moment pose as an expert in any of these things." So evident was this to the Finance Committee that Senator Jones of New Mexico was compelled to exclaim at the inexpertness of the witness, "I think we had better put Senator ——— on the witness stand. We will get more evidence here."

Mr. Briggs held forth for almost an entire day, traversing the universe during his fervid discourse, which fills forty-six printed pages of the Hearings, but it did not take him long to tell the committee that "the adoption and carrying out of the provisions of the proposed truth in fabric bill involve no serious difficulty" and glibly to tell the Senators more about the wool manufacture and clothing manufacture than the manufacturers themselves knew about their own business. That is characteristic of Mr. Briggs who testified that "selling shoddy unidentified in fabrics gives the textile manufacturers a tremendous advantage over the purchaser. . . . Here is a reason big enough to account for the vigorous opposition certain textile manufacturers are manifesting to the enactment of the truth in fabric bill." Repeatedly calling mere assertions facts, he asserted that "it is a known and indisputable fact that two-thirds of the raw material used in manufacturing wool cloth must be substitutes for virgin wool, the chief of which is shoddy." Did he forget that his employer, Mr. Alexander Walker, had admitted when cross-examined by Representative Winslow a year earlier that two-thirds of the cloths are worsteds and cannot contain shoddy? But such a matter is of little moment to Mr. Briggs. He also declared that "unidentified shoddy is the wolf and a wolf in sheep's clothing that is devastating the sheep industry of the United States," a picturesque assertion made constantly by the advocates of this bill, but which has no basis on which to rest. He quoted with approval a newspaper clipping version of a letter from one A. R. Bacon, chief metallurgical engineer of the Aeme Engineering Company of Toronto, sent to the Minister of Labor in which Mr. Bacon declared he had "been analytically examining samples from various manufactures of Toronto and the discovery is simply appalling" because "on examining samples guaranteed to be all wool in no instance was there 10 per cent of wool in any of the cloth." On the contrary the cloth was spun from woolen rags put together and a small amount of wool known as new wool and the fur clippings from various fur bearing animals. Once in a while a chicken may constitute a part of it. Other suits, claimed "to contain 60 per cent wool did not," he asserted, "have a thread of wool in the cloth."

Incredible as it may be in view of the seriousness of this legislation it is plain that portions of the definition of shoddy used in the bill were obtained from such stuff as this unknown Canadian is said, in a newspaper clipping, to have written to the Minister of Labor. Of course, it is wholly unworthy of credence, but it is a sample of many of the quotations Mr. Briggs presented to the committee.

#### MR. BRIGGS AND MR. ALEX. WALKER ON THE DETECTION OF SHODDY.

To anticipate the opposition of Senators from Southern States, Mr. Briggs assured them that "there is absolutely no reasonable ground for such a conclusion that the truth in fabric bill might discourage the use of cotton, but there is positive proof that unidentified shoddy in wool cloth discriminates against and does a great injustice to cotton." He testified that "there are at least four major points of difference in the appearance of the shoddy fiber from that

of the virgin-wool fiber which make it comparatively easy to detect the presence of shoddy in a fabric by means of a microscopic examination." But Mr. Alexander Walker wrote in the *National Sheep and Wool Bulletin*, November, 1918, that "there are no tests known to science whereby the presence of all wool shoddy surely can be detected in a fabric." Who is right, the advertising manager or the selling manager? Mr. Walker himself would seem to have shifted his ground and renounced his former statement, for he told Senator Watson that you can tell by dissecting a piece of goods whether or not shoddy is contained in it. (Hearings, Vol. II, p. 460.) Which statement by Mr. Walker is to be accepted as correct—the one he made in his article in 1918 or the one made to Senator Watson in 1921? Or are we to understand that some recent invention has been discovered by which what he said could not be done three years ago can now be done? If so, what is the invention?

#### SOME MORE EVIDENCE FROM NEWSPAPER CLIPPINGS.

Mr. Briggs then undertook to tell the committee what can and can not be done in different industries in which he has had no personal experience and as Mr. Prager said, "displayed a woeful ignorance of my business and shows that he is ignorant of it to a marked degree."

To convince the committee of the demand for the enactment of the bill Mr. Briggs read an extract from a letter sent by the active Ohio propagandist, W. W. Reynolds, to the *Daily News Record*, two small Indiana papers, and the *Southwestern Stockman-Farmer*, and with an oratorical flourish reminded the committee that in the Revolution the farmers were in the forefront of the fight and "it is the farmers now who are in the forefront of this fight for truth and justice and the protection of the people in their right to know and choose between virgin wool and substitutes for virgin wool"!

A careful, unbiased reading of the testimony given to the subcommittee will convince any person competent to understand the principles involved, that not a single witness presented for the bill by the mustering officer, George D. Briggs, had any experience in wool manufacture or clothing manufacture to qualify him to speak as an expert and really to give the committee information of any value whatsoever. Such a reader of testimony will agree with Mr. Charles J. Webb of Philadelphia, wool merchant, wool manufacturer, and deeply interested in the welfare of the wool grower, as well as the production in this country of more sheep and more wool, when he told the committee that the proponents of the bill "are looking for legislation to help them get on their feet, and they have not yet . . . sensed that the deflation that has taken place is natural, just as natural as the laws of gravitation, and it cannot be stopped by asinine, foolish legislation." They will also agree with Mr. Webb's other statement to the committee that "men are given to allow their selfish interests to appeal to them on a matter that they do not know anything about. I have been reading some of the testimony given here before this committee and I know that some of these fellows don't know anything about what they are talking about. They don't know and that is the worst kind of testimony."



# MISSTATEMENTS MADE TO SENATE INTERSTATE COMMERCE COMMITTEE CORRECTED.

## AUTHENTIC FIGURES DISCLOSE GLARING CARELESSNESS OF COMPULSORY TEXTILE BRANDING SUPPORTER.

THE depth and variety of ignorance of textile manufacture displayed by most of the advocates of compulsory textile branding legislation is clearly brought out in many ways. It calls for patience and a degree of charity.

Not only are they uninformed about these problems, but some of the more ardent ones seem unable or unwilling to confine themselves to accurate statements on other matters concerning which they can be presumed to be better informed. A glaring example of this was that portion of the testimony given at the Hearings on the Capper bill on June 1 to the sub-committee of the Senate Committee on Interstate Commerce, by Mr. George M. Wilber, Chairman of the Executive Committee of the Ohio Wool Growers Association, member of the Board of Governors of the Sheep and Wool Bureau of America, and at one time spoken of as a possible Secretary of Agriculture.

To show what Mr. Wilber told the sub-committee that day the following excerpts are taken from Volume I of the official record of those Hearings, pages 151 and 152. After assuring the members of the Committee that it was not his "idea to rehash a lot of this testimony," and declaring that he had "recapitulated it in a way so as to get in as few sentences as possible some of the high lights that I want to call your attention to," Mr. Wilber made the following remarkable assertions:

I need not tell you that farmers generally are in dire straits. As you no doubt know their income is only about one-third what it was one year ago, and, with the single exception of hogs, there is not one commodity bringing anywhere near its actual cost. Cattle, sheep, wool, milk, butter, cotton, tobacco, oats, corn, all selling at one-third or less than twelve months ago, while wheat still brings far below cost, and taxes are much higher, and other expenses practically the same as during the war.



Senator Gooding. You think these figures are correct, do you, that the prices they get are a little less than one-third of what they were getting a year ago?

Mr. Wilber. I would say, Senator, in going over the situation that the average is about one-third of what they were getting a year ago.

Senator Gooding. You have gone into it very thoroughly before making a statement of that kind, have you?

Mr. Wilber. Yes, sir, Senator; I have gone into it very thoroughly and I find that everything is selling at about one-third of what they were getting a year ago.

Senator Gooding. I would agree with you that that is about right, but would not make the statement because I have not given the matter careful enough study.

Mr. Wilber. Well, sir, wool that a year ago they were getting 90 cents a pound for is now bringing only 30 cents. So that is a reduction amounting to one-third the price they were getting a year ago.

Senator Gooding. That is the long staple XX Ohio wool, is it not?

Mr. Wilber. That is the highest priced wool. I referred to the XX Ohio wool. (Hearings, pp. 151, 152.)

That Mr. Wilber took marked liberty with the Committee must have been evident to all conversant with the range of prices in June, 1920, and June, 1921, but his broad statements were permitted to go into the record unchallenged and uncorrected. The statement indicates that Mr. Wilber's accuracy as an economist is about on a par with his accuracy as an expert on clothing.

Some months ago Mr. Wilber made an equally sweeping statement about the percentage of Americans who are "wearing some one's cast-off garments in the shoddy we are forced to buy." This statement he justified because he had made it many, many times and he had never heard it disputed. Mr. Wilber also stated that, "my opinion is that comparatively few clothes sold at high prices are all shoddy, but it is also my opinion that very few of them, at no matter what price, do not contain more or less shoddy, and I believe it would be an utter impossibility for any one to furnish substantial proof that such is not true." This method of reasoning leads one to surmise that if Mr. Wilber had

an opinion that the moon was made of cheese and nobody denied it in his hearing it would be so.

We do not propose to let Mr. Wilber again be able to say that his faulty statement to the Senate Sub-committee was not questioned and refuted. We shall show by figures of indisputable accuracy how incorrect is his statement that "everything is selling at about one-third of what they were getting a year ago."

Mr. Wilber did not indicate the authority on which he based his statement about prices, but all the authorities we have consulted show that what he said is without adequate foundation. For example, the figures printed in the *Commerce Monthly*, issued by the Bank of Commerce of New York, refute Mr. Wilber, not only for the month of June, but for every one of the three months, April, May, and June, for all of the commodities he mentioned, except cotton, corn, and perhaps oats. According to the *Commerce Monthly* the following were the wholesale prices for the months of April, May, and June, 1920, and for the corresponding months of 1921 for cattle, corn, cotton, hogs, wheat, Ohio fine delaine, and Ohio quarter blood wools, seoured basis:

#### WHOLESALE PRICES OF COMMODITIES

FOR MONTHS OF APRIL, MAY, JUNE, 1920, COMPARED WITH THE  
SAME MONTHS OF 1921. COMMERCE MONTHLY.

	April	1920 May	June	April	1921 May	June
CATTLE—Fair to choice native steers, per 100 lbs.	13.90	12.30	15.90	8.15	8.45	7.95
CORN—No. 2 mixed, Chi- cago	1.68	2.15	1.82	.55	.59¾	.61
COTTON—Middling, spot, New Orleans	41.50	40.25	40.75	11.25	11.88	11.25
HOGS—Good, merchant- able	15.10	14.50	14.80	8.25	8.46	7.95
WHEAT—No. 1 northern spring, Chicago	2.95	3.30	2.95	1.33¾	1.52	1.52
WHEAT—No. 2 red win- ter, Chicago	2.75	3.06	2.95	1.24¾	1.54½	1.40
WOOL—Ohio fine delaine, Boston	2.35	2.25	1.85	.92	.93	.85
WOOL—Ohio ¼ blood	1.10	1.00	.80	.45	.46	.44

The prices for the same periods as given in the *BULLETIN* of this Association and prepared by Mr. F. Nathaniel Perkins, Secretary of the Boston Wool Trade Association, for the two wools in the grease were as follows:

Ohio Fine Delaine	.90	.80	.70	.37	.36	.35
Ohio $\frac{1}{4}$ Blood	.60	.55	.47	.25	.24	.24

The following figures, taken from the *Market Reporter*, issued by the Bureau of Markets in the United States Department of Agriculture, do not give him any more support for his statement we have challenged than those of the *Commerce Monthly*. In fact, they do not give him a peg on which to hang his assertion.

RANGE OF WHOLESALE PRICES PER 100 POUNDS PAID PRODUCERS FOR STANDARD GRADE B MILK, 3.5 PER CENT BUTTER FAT. OHIO, INDIANA, ILLINOIS, MICHIGAN, AND WISCONSIN. MONTHS, APRIL, MAY, JUNE, 1920, AND SAME MONTHS, 1921. MARKET REPORTER.

	1920	1921
April	2.40—3.83	1.80—3.03
May	2.15—3.83	1.45—3.00
June	2.28—3.83	1.50—2.87

As for butter Mr. Wilber is just as far out of the way as he is with the other commodities we have cited, figures for which are also taken from the *Market Reporter* and cannot well be denied by Mr. Wilber. In no week of the three months, April, May, and June, 1921, did butter sell for anything like one-third the price for which it sold in the same months of the previous year. The figures given in the *Market Reporter* which refute Mr. Wilber are as follows:

PRICES FOR BUTTER, APRIL, MAY, JUNE, 1920, AND SAME MONTHS OF 1921. WHOLESALE AVERAGES PER POUND FOR EACH WEEK, CREAMERY 92 SCORE.

Week Ending	1920	1921	Week Ending
April 3	63.66	45.33	April 2
10	65.70	47.54	9
17	62.75	46.63	16
24	64.62	44.25	23
May 1	63.91	35.08	30
8	60.29	30.97	May 7
15	57.58	30.96	14
22	56.08	28.17	21
29	53.46	28.53	28
June 5	52.90	28.80	June 4
12	54.08	30.75	11
19	55.29	32.35	18
26	56.00	33.04	25

That Mr. Wilber's prices for lambs and sheep are as far wrong as any of the others he used in forming his ideas will be seen from the following table, made up from tables in the *Market Reporter*.

WHOLESALE PRICES BY WEEKS PER HUNDRED POUNDS FOR LAMBS AND SHEEP, CHICAGO, FOR APRIL, MAY, JUNE, 1920, AND SAME MONTHS OF 1921. MARKET REPORTER.

Lambs, 84 Pounds, Medium Prime			Wether's Medium Prime		
	1920	1921	1920	1921	
April 6	18.00 @ 20.75	8.75 @ 10.00	14.00 @ 16.00	6.00 @ 7.25	April 5
13	18.00 @ 20.75	8.75 @ 10.25	14.00 @ 16.00	6.00 @ 7.25	12
20	17.50 @ 19.00	9.75 @ 11.25	13.00 @ 14.50	6.00 @ 7.75	19
27	16.50 @ 18.50	9.65 @ 11.25	13.00 @ 14.50	6.00 @ 7.75	26
May 4	16.25 @ 18.50	9.50 @ 11.25	11.00 @ 14.50	6.00 @ 7.75	May 3
11	17.00 @ 19.25	10.25 @ 11.85	10.50 @ 14.00	6.50 @ 8.00	10
18	15.75 @ 17.25	10.50 @ 12.00	10.00 @ 13.00	6.75 @ 8.25	17
25	15.00 @ 17.00	9.00 @ 11.50	9.00 @ 13.50	4.50 @ 6.50	24
June 1	14.50 @ 17.50	9.50 @ 12.25	7.50 @ 11.00	3.50 @ 3.50	31
8	14.00 @ 17.00	9.50 @ 12.75	7.00 @ 10.00	9.00 @ 11.00	June 7
15	14.25 @ 17.00	8.25 @ 11.00	7.00 @ 11.00	4.00 @ 5.50	14
22	13.50 @ 17.00	10.00 @ 13.25	6.50 @ 9.50	4.25 @ 6.50	21
29	14.00 @ 17.50	8.00 @ 10.75	7.00 @ 10.50	4.00 @ 6.00	28

But Mr. Wilber, himself, has refuted his own testimony given to the Senate Committee. In a communication to the June, 1921, *American Sheep Breeder and Wool Grower* we find Mr. Wilber's name signed to an article concerning the Ohio Wool Warehouse and its successful handling of the 1920

clip, in which the last four sentences are as follows: "We netted our customers for all wools, including tags, burry, seedy short and everything, over 35 cents per pound last year and sold every ounce of our 1920 clip by April first. How's that? Do you know any other concern with such a record? Am leaving for Washington June 1st to appear before Senate Committee of Interstate Commerce for the Truth in Fabric Bill."—*Sheep Breeder* for June, 1921, p. 318.

We cannot feel that Mr. Wilber went into the matter "very thoroughly," as he assured Senator Gooding he had done, when he concluded that "the average is about one-third of the prices they were getting a year ago."

Nor does Mr. Wilber's testimony before the Senate Committee support what he wrote to the *Sheep Breeder* only a few days earlier. How can the prices for June, 1921, be only one-third those of the year before, when Mr. Wilber says the wool in the Ohio Wool Warehouse "netted its customers over 35 cents a pound last year"? Did the Ohio Wool Warehouse sell wool in 1920 for 90 cents a pound? Which statement does Mr. Wilber wish us to believe?

J. B. McP.



SHODDY CANNOT BE USED IN WORSTED YARNS.  
ANOTHER STATEMENT BY BRANDING ADVOCATES RE-  
FUTED. THE HEILMAN COMB CAN NOT AND HAS NOT  
BEEN KNOWN TO COMB SHODDY.

IN their testimony concerning the use of reworked wool in the manufacture of worsteds, given to the Committee on Interstate and Foreign Commerce of the House of Representatives and the sub-committee of the Senate Committee on Interstate Commerce, to which the compulsory branding bill was referred, the proponents of the bill made many statements which are not in accord with the facts, whether they knew it or not.

They must have known, however, that the members of those committees are men unfamiliar with the intricacies of the wool manufacture, seeking facts to enable them to form correct opinions. Many of the witnesses produced for the bill were as innocent of all practical knowledge of wool manufacture, and the difficulties the proposed bill would bring to the fabric and the clothing manufacturer as the men whom they were expected to enlighten. Others, presumably with more knowledge of these problems, made statements in printing which they were obliged later to admit when cross-examined could not be substantiated, and were not true.

One question in dispute between the proponents of the bill and its opponents was whether or not reworked wool is used in the worsted manufacturing process. On the part of the manufacturers it was contended that it could not be, and is not so used; on the part of the advocates of the bill it was asserted in a document presented to the House Committee by Mr. Alexander Walker that "at least 66 2/3 per cent of fabrics produced in the United States contain substitutes." This, of course, could not be true unless shoddy is used in the making of worsteds. But when Mr. Walker was cross-examined by Representative Samuel Winslow of Massachusetts, he trimmed, and in answer to the question, "Are you going to accept their [the opponents'] statement, as I understand it, that these worsteds are all made

of virgin wool?" admitted the statement was true by saying, "I accept that statement, as far as this country is concerned." He then volunteered this technical gem, "I do not think that we have yet ceased to be an inventive nation and I believe that we are *liable* to have machinery invented *sometime*—in fact it is reported that it is already invented on the other side—by which they will be able to use shoddy in worsteds." "At this time [March, 1920,] we have no such machinery in this country." Mr. Walker assured Mr. Winslow that he "would not want to go into any company at this time that was advancing that machinery." (House Hearings, p. 472.)

In a pamphlet, entitled "Objections to the French-Capper Truth in Fabric Bill Answered," issued by the National Sheep and Wool Bureau, of which Mr. Walker is president, and distributed in the spring of 1920 after Mr. Walker's admissions quoted above, it is stated:

The opponents of the French-Capper Truth in Fabric bill seek to disseminate the belief that only virgin wool can be used in worsteds.

This is seriously misleading and opens the door to flagrant and unpardonable deception. . . .

Therefore this false idea would make it easy to palm off even the most inferior shoddy in manipulated worsteds, that it would place a tremendous premium on the use of even the most inferior shoddy. (Pamphlet, pp. 8 and 9.)

"Modern machinery greatly facilitates the use of the short-wool fiber in manufacturing worsted yarn," the pamphlet continues. "Therefore, now," its learned compiler—whose very words Mr. Walker almost appropriates—sagely concludes, "with modern machinery shoddy may be used in manufacturing worsted yarn."

To support this remarkable conclusion the writer of the pamphlet gives excerpts from two books on textiles. These quotations merely show that short wools can be combed, which any bobbin boy knows is a different matter. This textile expert then produces what is said to be a news item from Bradford, England, appearing in the *Daily News Record* of November 6, 1920, and headed "Germany Produces Fine Worsteds from Short Wool British Rejected." This is pro-

duced with a triumphant gesture to show that Germany is producing high quality worsted cloths from short South African wool, which had been exported from Bradford as not suited to British worsted requirements. From this irrelevant statement this worsted wizard declares it to be deducible that shoddy can be used and is used in making worsteds. Here are the very words in which the benighted worsted manufacturers are set right:

It was because the fiber of shoddy is shorter than the longer virgin wool fibers that heretofore there has been some difficulty in using shoddy in worsted yarn, but the facts here presented prove that in the modern machinery and methods short wool fibers may easily be used in worsted yarns.

Therefore, henceforth, [observe the compiler uses the future rather than the present tense] great quantities of shoddy may be used [Mr. Walker asserts in his brief "are now used"] in worsteds as well as in woollens.

Furthermore, because the opponents of the French-Capper Truth in Fabric bill have endeavored to establish the belief that worsteds can only be virgin wool, it will be especially easy to palm off shoddy as virgin wool worsteds, and in consequence, "it is from misrepresented worsted fabrics that the people and the trade especially need the protection of the French-Capper Truth in Fabric bill." (Pamphlet, p. 9.)

On June 1, 1921, Mr. Walker appeared before the subcommittee of the Senate Committee on Interstate Commerce in support of the Capper bill, Senate bill No. 799, the counterpart of the French bill in the House of Representatives, presented by Representative French of Idaho. To that subcommittee Mr. Walker made statements almost identical with those appearing in the pamphlet, "Objections to the French-Capper Truth in Fabric Bill Answered," indicating that if he was not the author of the pamphlet he accepted *in toto* the erroneous statements and conclusions of its writer, even though he had had nearly a year in which to enlighten himself. Mr. Walker told the Senators:

The opponents of this measure make the emphatic statement that they [worsted] can not be made of shoddy. For the sake of the argument I will admit that clear worsted can not be made of shoddy. But, Mr. Chairman, total worsted production includes manipulated worsteds.

Mr. Walker, in answer to Senator Watson's question, "When you say manipulated worsteds what do you mean?" replied:

Worsted Cheviots—worsted and wool. French back serges. The reason that shoddy could not be used heretofore for worsted purposes was because of the use of the Bradford process, which was practically in use all over this country, and they could not comb the short fibers of the shoddy. But modern machinery has come into vogue and today there are four different types of machines for combing processes. The Lister combs, used for the long wools, and Holden combs, used for the medium length wools, and the Noble combs used for the average wools—these are very extensively used—and then the Heilman combs, known as the French process. The Heilman comb is suitable for either of the wools, either the long or short wool, and is used extensively in France and is becoming very popular in this country.

The opponents of this measure say that shoddy fiber can be an inch and a quarter in staple, and I think you will see some evidence of shoddy with an inch and a quarter staple. With this French process, the Heilman comb, even cotton less than 1 1/2 inches in staple can be combed. (Senate Hearings, p. 48.)

The foregoing certainly implies, if it does not say, that by the use of the Heilman comb shoddy can be combed, and having been combed can be used in the manufacture of worsteds. Following the foregoing quotation Mr. Walker read the identical quotation printed in the pamphlet: "Objections to the French-Capper Truth in Fabrie Bill Answered," and taken from a Bradford news item printed in the *Daily News Record*, and ended the discussion of this point in his argument by saying:

I submit to you, therefore, that there is no legitimate reason why the longer grades of shoddy cannot be used in worsteds, regardless of whether they are used or not.

Then, becoming a bit timid and doubtful, Mr. Walker added, "I do not make the statement they are."

On the other hand, the pamphlet put out by Mr. Walker's organization, the National Sheep and Wool Bureau, asserted that "this false idea" [that only virgin wool can be used in making worsted yarns] "would make it so easy to palm off the most inferior shoddy in manipulated worsteds."

Another feature of Mr. Walker's testimony was his effort to make the Senate Committee believe that only recently was machinery invented which can comb short wool fibers, when he said, "But modern machinery has come into vogue, and today there are four different types of machines for combing processes." After mentioning the four different types—the Lister, the Holden, the Noble, and the Heilman, he added, "The Heilman comb is suitable for either of the wools, either the long or short wool, and is used extensively in France and is becoming very popular in this country."

In his testimony before the House Committee in March, 1920, Mr. Walker admitted to Representative Winslow that "at this time we have no such machinery in this country," meaning machinery "by which they will be able to use shoddy in worsteds." Yet in June, 1921, only a few months more than a year later, we find Mr. Walker in Washington telling the Senate Committee that the Heilman comb [which he implies is used in combing shoddy for worsted yarns] "is becoming very popular in this country." Does he mean to say that in the year that followed his first testimony many Heilman combs were imported by the wool manufacturers of this country and distributed among them? If not, what do the words, "and is becoming very popular in this country," mean?

Now the fact is that the combs mentioned by Mr. Walker are not modern machinery which "has come into vogue." All four of the machines are much more than half a century old. The Noble comb was invented in 1805, and improved in 1833, 1836, and 1853. Lister, Holden, and Heilman worked contemporaneously during the decade from 1840 to 1850 on their respective inventions and perfected them about those years, so that the Heilman comb cited by Mr. Walker was invented at least seventy years ago and can hardly be classed as a "modern" machine which "has come into vogue."

The one and effective way to answer the false assertions of the National Sheep and Wool Bureau's pamphleteer and the equally inaccurate statements of its president, is to quote what Mr. L. Dardel, President of the Société Alsacienne de Constructions Mécaniques, makers of the Heilman combs,



says in a letter dated July 1, 1921, to Mr. H. W. Nelson, the Company's Bradford representative, respecting the working of shoddy in Heilman combs for the making of worsteds. Mr. Dardel wrote as follows:

SOCIÉTÉ ALSACIENNE DE  
CONSTRUCTIONS MECHANIQUES.

PARIS, July 1, 1921.

H. W. NELSON, Esq.,  
8 Currer St.,  
Bradford, England.

DEAR SIR:—

Upon receipt of your letter of June 8th concerning the question of shoddy, we forwarded your questions, after studying them, to our TECHNICAL SERVICE at Mulhouse and we are today in receipt of a communication from the TECHNICAL SERVICE as follows:—

“By shoddy we mean short wool, obtained by the tearing to pieces of wool cloths. Mixes of good wool and wool obtained by the tearing to pieces of cloth or noils can only be made into woolen yarn and cannot possibly be made into worsted yarns. The latter, and particularly the French System, does not permit the use of mixes with short wools because in this case the short fibers have passed into the noils at the different processes; or else would produce a yarn irregular and of poor quality. Our P.L. Comb produces only slivers of pure wool having a minimum length of fiber of 45 m/m. It can also comb Noils from Noble combs, but the product from these can only be used in the spinning of woolen yarns for the reasons stated above. We do not know of a comb invented in Germany for combing shoddy; which, we repeat, cannot be employed in the French Worsted System.”

Assuring you of our best attention, we remain

Yours sincerely,

Société Alsacienne de Constructions Mechaniques.

(Signed) L. DARDEL.

This should settle the disputed point about the use of shoddy in making worsted yarns, for Mr. Walker himself says that it is the only comb that can comb the short fibers of wool.

J. B. McP.

## MEN RESPONSIBLE FOR THE FRENCH-CAPPER BRANDING BILL.

SEQUENCE OF EVENTS POINTS TO ALEXANDER WALKER AND  
GEORGE D. BRIGGS AS ORIGINATORS OF THE CAMPAIGN.

DURING his long closing speech before the Senate sub-committee in favor of the Capper compulsory textile branding bill, Mr. George D. Briggs was asked by Senator Watson the following question:

Senator Watson. "And when did Mr. Walker begin his first fight on this proposition?"

To this Mr. Briggs replied, "I don't know just what you mean by the first fight, Senator."

Mr. Alexander Walker, not waiting for an answer from Mr. Briggs, volunteered the reply, "Three years ago."

Then Senator Watson asked, "When was the first widespread attention given to the subject of truth in fabric legislation?"

Mr. Briggs, feeling able to risk an answer, replied:

"When an official of the United States Government made the suggestion that the question of fabric legislation be taken up with the National Sheep and Wool Bureau. That was ex-Secretary of Commerce William C. Redfield and it was in the spring or early summer of 1919." "This," he stated, "was the inception of this present move." And inasmuch as Senator Watson brought the point out, Mr. Briggs remarked, "I may as well take the time to go into that point further," and said:

"Coming out of that suggestion of Secretary of Commerce Redfield, the National Sheep and Wool Bureau wished on me the task, with little credit and much hard work, of acting as chairman, as it were, of the committee to take up this subject and study it and I came on here to Washington and discussed it with all of them in both the Senate and the House and others here, including the Federal Trade Commission who had studied the thing, and to look over the situation to find out what could be done or what should be done. The matter

was discussed with various distributors and wool growers, and farmers, with a view of determining how to carry the thing out, and it became apparent after this investigation of what had been done in the history of results that in order to give the protection to the public and the wool grower which was vital two things were necessary in any bill that might be drawn: one was the compulsory stamping of cloth and the other the identification of both virgin wool and substitutes in clear and unmistakable terms."

From this testimony given by Mr. Briggs, advertising manager for Strong, Hewat & Company, several things appear:

I. According to Mr. Briggs, Secretary Redfield made the first suggestion in the spring or early summer of 1919 that the question of fabric legislation be taken up with the National Sheep and Wool Bureau.

II. That this whole agitation came from men who hadn't the slightest practical experience in wool manufacture, because neither Mr. Briggs, nor Secretary Redfield, nor any member of the Federal Trade Commission, nor the men in the Senate or House who drew the bill with whom he went over the situation, nor wool growers, nor farmers, the men Mr. Briggs testified he consulted, knew the problems the proposed legislation would bring to the wool manufacturer and the clothing manufacturer. Nor did they consider whether, should the French-Capper bill be enacted, it would give any valuable information to the innocent purchaser.

III. That the only men who knew the real problems involved, and whose objections would have been given weight by anyone except the men determined to secure this legislative monstrosity, were studiously avoided and were not consulted about the proposed bill.

Mr. Briggs and his employer do not seem to be agreed about the man who started this movement, the former testifying that it was Mr. Redfield who "made the suggestion that the question of fabric legislation be taken up with the National Sheep and Wool Bureau, this being in the spring or early summer of 1919," while Mr. Alexander Walker, in answer to Senator Watson's question, "And when did Mr. Walker begin his first fight on this proposition?" replied, "Three years ago."

On the basis of facts submitted below we contend that neither of these replies is correct. It is our impression that this agitation in its present form began with an article credited to Mr. Alexander Walker in Number 3 of Volume 1 of the *National Sheep and Wool Bulletin* printed in November, 1918. In that article may be found many of the wild and inaccurate statements upon which are based the so-called arguments for the passage of the compulsory branding bill.

In that article Mr. Walker breezily asked whether there was a cause big enough to account for the decline of sheep numbers, declaring that "it must be discovered and if it proves to be the real cause, it must be removed." Without further ado he then proceeded to make the discovery by answering his baffling question in this wise: "Yes. The simple fact is that selling shoddy as virgin wool menaces and dries up the sheep and wool industry of the whole world. Mark you! The menace and wrong is not in that shoddy is sold but that it is sold as virgin wool."

In the same article Mr. Walker used many terms which have been used again and again in his campaign for the legislation he seeks. "Shoddy is reworked as many as six and even eight times," he declared, although in the same breath the gentleman also said, that "There is no test known to science whereby the presence of all wool shoddy in a fabric can prior to service surely be detected or the number of times the shoddy has previously been reworked be determined." The phrase "shoddy is reworked as many as six and even eight times" may properly be termed the trade-mark of the agitation. It is a characteristic utterance and it crops out in nearly every speech, pamphlet, and resolution which has been part of the agitation. It is the language used by the members of the Colorado Legislature in their resolution indorsing the French-Capper bill and calling upon their Senators and Representatives in Congress to support the bill, and it is the language used by the compiler of the pamphlet, entitled "*The Shoddy Industry vs. The Virgin Wool Industry*," issued by the National Sheep and Wool Bureau.

In that same article appear the ridiculous and inaccurate figures, which have since been used by Mr. Walker before

Congressional Committees and by his misinformed satellites and careless supporters of the proposed branding bills, to show the percentage of fabrics which contain shoddy. The following is one of them:

It is estimated by those who have made an exhaustive, close and impartial study of the subject and who should be qualified to judge, that even in normal times prior to the outbreak of the war in 1914 at least 80 per cent of fabrics made and sold in the United States as being made exclusively of virgin wool contained shoddy.

It would have been enlightening to know the names of those persons "who made an exhaustive study of the subject and who should be qualified to judge." Inasmuch as Mr. Walker is a member of the only textile firm or corporation engaged in wool manufacture which advocates this ill-advised legislation, it could scarcely have been any person connected with the industry. Wouldn't that have been a modest statement if it should turn out that the person making the unsupported assertion was none other than Mr. Alexander Walker himself! Perhaps it was that eminent investigator, with a passion for truth, George D. Briggs, who about that time was offering to various wool manufacturers in turn a ready-made "truth-in-fabric" advertising campaign which he would "put on" and conduct on a long term contract.

"Think," said Mr. Walker in his article, "of the colossal injustice and loss this has inflicted on the entire sheep and wool industry." "How is it," he asked, "that a condition exists wherein this octopus of wrong has usurped such power and scope? For it is a condition that on the one hand forces tragic results in the lives of millions of poor people and on the other hand by compelling virgin wool to compete in the raw material market on a most unjust basis with shoddy, has struck at the very vitals of the wool and sheep industry and undoubtedly has been a big factor in causing this highly essential industry to steadily dwindle, especially in the United States, to its present alarmingly small portions."

Mr. Walker, arousing his readers to the expectation that "when shoddy is unmasked and is sold only and openly for what it is, the consequent demand for virgin wool even with



the increased production which may result from the concerted effort being put forth to increase sheep husbandry, will insure a price to the wool growers sufficiently high to make sheep husbandry sure and profitable throughout the coming years," issued a call in the following words for the propaganda which he later told the Senate Committee had not been carried on "in any way, shape, or manner":

It is a time for action, and it is of the utmost importance to the sheep and wool industry that it be thoroughly organized. Steps should be taken at once to strengthen and broaden the National Organizations, and efforts should be made to get these vital issues clearly before the Secretary of Agriculture and other Government officials directly related to the problem, with a view to getting their co-operation in forming local organizations, both State and County, throughout the United States.

As these organizations are formed, by means of booklets and lectures and in every other practical way, the issues should be brought before the local organizations and clearly defined, with a two-fold purpose; first, to recognize that the world after the war, as never before, will have ideals and ideas which will demand the true, the best, the genuine, and thus will place the people as never before on a virgin wool basis.

In order to meet the demand for virgin wool, sheep husbandry must be greatly extended, and there must be developed the closest appreciation and co-operation of these local organizations in quickening the consciousness of the people and of the trades especially, through the retail organizations, the clothing manufacturers' organizations, and the fabric manufacturers' organizations, both local and national.

To our mind, it is the time above all when the bull may be taken by the horns—and thrown—when worthy fabrics may be made and sold for precisely what they are, and when virgin wool may come fully into its own, thus on every hand inspiring our industries to the highest possible standards, and safeguarding our sheep and wool industry for the great future that is at hand.

From the quotations made it is plain either that Mr. Walker's article is the source from which the material for the many articles printed, addresses made, and resolutions framed has been drawn or else that it and they all came from some source not yet revealed. It is plain also that Mr. Walker

advised strongly the kind of propaganda which was later carried on.

Mr. Walker's article was printed in the Bulletin of the National Sheep and Wool Bureau in November, 1918. Up to that time the Bureau, whose "first work in which it was pretty active," according to Professor Charles S. Plumb, a member of the Governing Board of the Bureau, who testified March 25, 1920, before the House Committee on Interstate and Foreign Commerce, "was during the war getting sheep men, and they had conferences at Chicago in which a great effort was made to increase the number of sheep on the farms, and it played a part in the purchase of sheep and placing them on the cut-over lands of Michigan, Wisconsin, and that section. And then following, after the war was discontinued, this work of endeavoring to do something to assist in clarifying the clothing situation was taken up." (House Hearings, p. 269.)

After the armistice and the stimulus of war work was taken away, the field of activity seemed to be lessened for the Bureau and its Board of Managers hailed the author of the article in the November issue of its Bulletin as a Moses to lead them to the promised land, for had he not with fervor aroused by the war written in that article that "*all men will appreciate that truth alone won—that a virgin-wool basis in all things alone could and did win?*"

At the annual meeting of the Bureau held in Chicago on June 16, 1919, Mr. Walker was elected president of the organization and made a speech of acceptance in which he declared that "the protection and promotion of sheep husbandry is a key problem that lies right at the heart of the task of insuring a permanent world peace and the well being of all the people." He desired "a reasonable time to examine carefully the many elements entering into this problem so that I can intelligently co-operate with you in framing—in the near future—a concrete, definite, and comprehensive plan of action."

In a pamphlet entitled "World Peace and Sheep Husbandry," issued by the National Sheep and Wool Bureau in 1919, it is shown how it happened that Mr. Alexander Walker was chosen to supplant Charles E. Timson, United States

manager for William Cooper & Nephews, as president of the Bureau. It is there stated that "the activity and success of Alexander Walker, vice-president of Strong, Hewat & Co., Inc., in bringing before the public, the sheep and wool industry, and the textile and clothing industries his persistent efforts to secure the honest labeling of wool textiles undoubtedly focussed the attention of the officers and directors of the National Sheep and Wool Bureau on Mr. Walker as the logical man for the leadership of the Bureau in the constructive program that is being formulated [1919] for the rehabilitating of sheep husbandry."

During the winter preceding his election Mr. Walker, according to an apparently inspired article in the *Philadelphia Ledger* and published in this same pamphlet, addressed among others the following conventions: The National Retail Clothiers' Convention, held at Chicago, January 14, the New Jersey State Retail Clothiers' Association Convention, joint meeting of the Retail Clothiers' Association of Kansas and the Kansas City Men's Apparel Club, held at Kansas City, February 3, Iowa State Retail Clothiers' Association at Des Moines, Nebraska State Retail Clothiers' Association, Omaha, West Virginia State Retail Clothiers' Meeting, Texas State Retail Clothiers' Association, April 23, San Antonio, and Mid-Western Retail Clothiers' Association at Kansas City, June 11.

Mr. Alexander Walker took some time (how much is not important) to investigate the situation and upon his indefatigable lieutenant, George D. Briggs, according to the latter's testimony before the Senate sub-committee, wished "the task of acting as chairman, as it were, of the committee to take up the subject and study it." It was Mr. Briggs, whose ignorance of wool manufacturing problems and processes has repeatedly been shown to be abysmal, who "came on here to Washington and discussed it with various statesmen" with the result the French bill was drawn by men as ignorant of the problem they tackled as the chairman of the committee who enlisted their services, and was introduced into the House of Representatives on January 7, 1920. (Senate Hearings, p. 452.)

It is difficult to see how any unbiased person can peruse the sequence of events in the record thus set down, without being convinced that the responsibility for the French-Capper bill and the widespread propaganda for its passage by Congress rests with Mr. Walker and his advertising manager.

These facts refute the statement that this French-Capper bill is the result of a popular demand for the compulsory branding of textiles. It was adopted by some organizations after Mr. Walker, and his Mr. Briggs, had taken advantage of the war ferment, high prices, and the subsequent deflation of raw materials, to capitalize the wool growers' discontent. These two men, both without practical knowledge of wool manufacture, and not the wool growers, are the real instigators of the propaganda, who have secured misguided adherents and have brought the campaign to its present pass.

In this connection let us repeat once more that wise remark of George D. Briggs, advertising manager of Mr. Walker's company:

"I think it will be generally agreed that the virgin wool campaign as sponsored by Strong, Hewat & Company for the advancement of truth in fabrics has been a successful selling idea."

J. B. McP.

## Obituary.

### HARRISON BENN.

MR. HARRISON BENN of Clayton, England, associated with his brother, William Henry Benn, in Joseph Benn & Sons, Incorporated, manufacturers of alpaca and mohair and owners of the Greystone Mills at Greystone, Rhode Island, died in his seventieth year on Saturday, July 23, at his residence, Holcombe Hall, Dawlish, Devonshire, England.

Mr. Benn, the second son of the late Joseph Benn, was one of the best known men in the Bradford trade. In his boyhood he went into a small mill where his father had begun business in the spinning trade under the name of J. Benn & Company. As the firm's business prospered he was sent to school and received the greater part of his education in Germany. Returning to Clayton, where meanwhile his father and partners had built an extensive mill known as Oaks Mills, he took an active and leading part in the direction of the business. In 1881 the partnership was dissolved, Joseph Benn retiring and starting a business with his five sons at Beekside Mills, Great Horton, under the style of J. Benn & Sons, Ltd. Mr. Harrison Benn's business abilities were thrown into the new venture with untiring energy and the business developed until the new firm came to be recognized among the leading manufacturers of alpaca and mohair fabrics, and as rivaling the partnership from which some of the members had withdrawn. In 1903, largely through the initiative of Mr. Harrison Benn, the firm decided to extend its activities to the United States, and located its enterprise at Greystone, Rhode Island, where extensive mills were erected which employ a large force of operatives. This was one result of the tariff law then in force and is ocular proof which cannot successfully be denied. Until the outbreak of the World War Mr. Benn was a frequent visitor to this country, maintaining with his brother, William Henry Benn, active supervision over both the Great Horton and the Greystone business. Mr. Benn is survived by his widow and three daughters.

### RICHARD CAMPION.

ON September 3, 1921, Richard Campion, for many years prominent as a manufacturer and selling agent in the worsted yarn industry in Philadelphia, died, aged seventy-nine years, after an illness of almost six months. Born in Pemberton, New Jersey, he removed at an early age with his parents to Mt. Holly, and later



to Camden, where he spent the remainder of his life. After serving during the Civil War he got into the worsted business in 1867, as a member of the firm of Campion & Lister, proprietors of the Chatham Mills at Third and Berks Streets, Philadelphia, the partnership continuing until 1869, when Mr. Lister withdrew. A partnership then formed by Edmund N. Grundy, William H. Grundy, and Richard Campion, under the name of Grundy Brothers & Campion, continued to operate the Chatham Mills until 1873, when they moved to the Star Mills at Howard and Jefferson Streets. In 1876, they moved to Bristol, Pa., where the Bristol Mills were erected. There the partnership continued until December 31, 1887, when Mr. Edmund N. Grundy having died in 1884, his interests were withdrawn. At the same time Mr. Campion withdrew to engage in the worsted yarn commission business, the mills of W. H. Grundy & Co. being among those he represented. He continued in that commission business until his retirement from active work on December 31, 1917.

Mr. Campion was a strong advocate of, and a believer in, the protective tariff system, and for a number of years was a member of the National Association of Wool Manufacturers, resigning in 1918. At one time he was president of the New Jersey Society, vice-president of the Manufacturers' Club of Philadelphia, and a director of the Fire Association of Philadelphia. He married a daughter of Mr. Edmund N. Grundy, who died in the early eighties. He is survived by one daughter, Mrs. James Enack of Philadelphia.

#### CHARLES C. BUTTERWORTH.

CHARLES C. BUTTERWORTH, who retired more than ten years ago from active participation in the affairs of H. W. Butterworth & Sons Co., Philadelphia, manufacturers of mercerizing, dyeing, and finishing machinery, died from heart disease on July 21, at Kineo, Maine, aged seventy-four years.

Mr. Butterworth was one of the three sons of Henry W. Butterworth, and grandson of John Butterworth, who founded the business in 1820. It was shortly after James Butterworth, an elder brother, had been admitted to the firm in 1867, that Chas. C. Butterworth and Wm. B. Butterworth also were admitted to the firm, which was then changed from H. W. Butterworth & Son to H. W. Butterworth & Sons. In 1889, the business was incorporated under its present title. Mr. Butterworth took an active part in the development of the business, until he retired. He is survived by his widow, two daughters, and his son, Henry W. Butterworth, who is now vice-president of the company. He was a member of the Union League, and prominent in the masonic fraternity.

## Editorial and Industrial Miscellany.

### SENATOR GOODING'S ATTACK ON THE WOOL MANUFACTURERS.

THE wool growers of the United States have been wont from time to time to fall upon the wool manufacturers and charge them with all the crimes in the calendar. Very often these periods of violence have been accompanied by demands for tariff action designed not so much for the furthering of sheep growing as for the damaging of the manufacturers. Too late the growers' frenzy has abated and they have come to see that they were hurting themselves quite as much as they were injuring their customers—and supposed enemies—the manufacturers.

Some of them are again apparently going through the same old experience. Senator Gooding's address before the Senate on July 28, 1921, was as bitter an attack as the wool manufacturers have endured for many years; but it was not without premonitory rumblings from various quarters. It is not our purpose to add fuel to the flames of the wool growers' present dislike for their market by answering Senator Gooding in detail. Suffice it to say that his chief object of attack was the "compensatory" duties. In some way he seems to feel that these duties make the wool manufacturers rich and the wool growers poor, and that in this respect the ratios in the Fordney bill make a bad matter worse.

Two errors in this position it seems to be impossible for the wool growers to recognize. The first one is the assumption that these "compensatory" duties are anything except duties on wool in the manufactured form. They are *wool* duties—they are duties on *wool*—they protect the *wool grower*. In so far as they are "compensatory," it is the grower who is compensated, and without them the duty on manufactured wool is useless. The second is the inadequate comprehension of the relations between the wool duties on unmanufactured wool and these duties on wool in manufactured products. Senator Gooding actually proposes in his amendment a change in the bill which would provide for less wool duty on wool in imported yarn and cloth than on the same kind of wool imported in tops. Apparently he sees clearly that tops are combed wool which, if imported, cuts into the consumption of uncombed wool;

hence he advocates an adequate "compensation" to the wool grower for this competition. The heavy importations of tops before the passage of the "Emergency" tariff convinced even the most skeptical that the competition between wool in tops and wool unmanufactured is real. Thus far the Senator evidently has not been willing to accept the equally evident idea that wool in yarn, or in cloth within a few weeks longer, would have repeated the history of tops last spring, for the simple reason that wool in these forms also competes directly with unmanufactured wool.

The large importations of tops in the early months of 1921 were merely the first step in a process as certain as sunrise. Tops always come first, but yarns, cloths, and garments are certain to follow if the wool growers do not get the right duty on the wool contained in all forms of imported manufactures of wool. The possibility was first manifest in the case of tops because commerce in tops could be quickly instituted, whereas the more advanced forms of manufactures require the creation of agencies of distribution which require time to set up.

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### CARDINAL OBJECTIONS TO COMPULSORY TEXTILE FABRIC BRANDING.

ELSEWHERE in this issue are given many quotations from the hearings before a sub-committee of the Senate Committee on Interstate Commerce concerning the Capper bill providing for the compulsory branding of wool textiles. These cast an illuminating side-light on the reasons why this agitation has been revived. They show how simple a matter it is for an ignorant prejudice to be exploited by any skilled publicist. In any consideration of this subject, however, the central thoughts never to be lost sight of are:

1. Branding of wool fabrics to show only their fiber content cannot have any relation to the durability, warmth, or other desirable properties of the fabric and hence at best is useless, and at worst is misleading.

2. The distinction between wool fibers "previously spun or woven" and those spun or woven the first time cannot be established by physical or chemical test. It can only be made certain by knowledge of the fibers' actual history—a difficult matter to make sure of without costly systems of oaths, inspections, and bondings.

3. The knowledge of fiber content provided for by the proposed law would not only be useless or misleading to the consumer, if accurately transmitted to him, but the process of making sure that it was accurately transmitted to the consumer opens up chances for fraud not offered by the normal channels of commerce. Claims of merit implied in false declarations under the law would be extremely difficult to refute.

4. Branding to show only fiber content would be bad enough if it were merely made optional under a Federal registration and branding system. To make it compulsory puts a needless and costly handicap on all honestly conducted wool fabric business, and in addition to offering no hindrance to dishonest persons, opens up to them new chances for deception. It is not unlike a Federal statute requiring all men to wear a button telling how many times they have been to Boston. If honestly lived up to, it is meaningless, and whatever advantages may be gained from compliance are open to the just and the unjust alike, regardless of the facts.

5. Compulsory branding of the sort contemplated, if honestly and effectively done, would cost something. That cost would be justified only if the return to the public were valuable and certain. It could be neither of these.

6. The wool growers who expect that this project will raise wool prices are deceived, first, as to the amount of reworked stock used, second, as to its use as a substitute for wool instead of as a supplement to the wool supply as is actually the case, and third, as to the facts concerning the relative prices of new and reworked stock and the fabrics made from them. These facts have been brought out repeatedly.

7. The project does not provide for "Truth in Fabrics" but for the compulsory branding of incomplete assertions, the accuracy of which is incapable of proof or refutation and the implications of which are deceptive.

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DUTIES ON SCOURED POUND OF WOOL EQUIVALENT TO  
 RATES ON GREASE POUND IN AMENDMENT TO FORD-  
 NEY TARIFF, H. R. 7456, SUBMITTED TO SENATE  
 JULY 28, 1921, BY SENATOR FRANK R. GOODING OF  
 IDAHO.

	Shrinkage Per Cent.	Duty on One Grease Pound. Cents.	Equivalent Duty on One Scoured Pound. Cents.	Shrinkage Per Cent.	Duty on One Grease Pound. Cents.	Equivalent Duty on One Scoured Pound. Cents.
All over 93%	96	1.6	40.00	51	16.5	33.67
1.6c. per	95	1.6	32.00	50	16.5	33.00
grease lb.	94	1.6	26.67	49	16.5	32.35
	93	2.6	37.14	48	17.5	33.65
	92	2.6	32.50	47	17.5	33.02
	91	2.6	28.89	46	17.5	32.41
	90	3.6	36.00	45	18.5	33.64
	89	3.6	32.73	44	18.5	33.04
	88	3.6	30.00	43	18.5	32.46
	87	4.6	35.38	42	19.5	33.62
	86	4.6	32.86	41	19.5	33.05
	85	4.6	30.67	40	19.5	32.50
	84	5.6	35.00	39	20.5	33.61
	83	5.6	32.94	38	20.5	33.06
	82	5.6	31.11	37	20.5	32.54
	81	6.6	34.74	36	21.4	33.44
	80	6.6	33.00	35	21.4	32.92
	79	6.6	31.43	34	21.4	32.43
	78	7.6	34.55	33	22.4	33.43
	77	7.6	33.04	32	22.4	32.94
	76	7.6	31.67	31	22.4	32.47
	75	8.6	34.40	30	23.4	33.43
	74	8.6	33.08	29	23.4	32.96
	73	8.6	31.85	28	23.4	32.50
	72	9.6	34.28	27	24.4	33.42
	71	9.6	33.10	26	24.4	32.97
	70	9.6	32.00	25	24.4	32.53
	69	10.6	34.19	24	25.4	33.42
	68	10.6	33.12	23	25.4	32.99
	67	10.6	32.12	22	25.4	32.56
	66	11.5	33.82	21	26.4	33.42
	65	11.5	32.86	20	26.4	33.00
	64	11.5	31.94	19	26.4	32.59
	63	12.5	33.78	18	27.4	33.41
	62	12.5	32.90	17	27.4	33.01
	61	12.5	32.05	16	27.4	32.62
	60	13.5	33.75	15	28.4	33.41
	59	13.5	32.93	14	28.4	33.02
	58	13.5	32.14	13	28.4	32.64
	57	14.5	33.72	12	29.4	33.41
	56	14.5	32.95	11	29.4	33.03
	55	14.5	32.22	10	33.0	36.67
	54	15.5	33.69	9	33.0	36.26
	53	15.5	32.98	8	33.0	35.87
	52	15.5	32.29			

Not over 10%  
 33c. per  
 grease lb.



NOTE. Within the ranges of ordinary commercial shrinkage these elaborately worded grease wool duties all approximate an equivalent of 33 cents per scoured pound. It would have been much simpler to express them thus in plain language. All in the wool trade or industry would have known that a rate thus stated provided for the same duty on all wools regardless of price or shrinkage. They would have known also that the rate thus prescribed was substantially higher on all shrinkage below 66 per cent than the rate in the Payne-Aldrich bill. It would have been a simple matter, also, to calculate at various prices the ad valorem equivalents of the flat rate thus proposed.

An examination of the table brings out one or two interesting points, not at first apparent, concerning the proposal. For example, the table makes it clear that the duty of 11.5 cents per grease pound of wool shrinking 66 per cent yields a scoured pound equivalent of 33.82 cents. Or making the necessary intervening figures, a duty of 11 cents per grease pound on wool shrinking  $66\frac{2}{3}$  per cent is seen to be 33 cents per scoured pound. This has a familiar sound. These are the duties and the relations between them provided in the Dingley and Payne-Aldrich laws. For shrinkages greater than 66 per cent, it is probable that attention will be called to the fact that there is a substantial reduction in the duties provided by this proposal. In judging the value of this reduction, however, it should be remembered that few American-grown wools shrink over 70 per cent. The most noteworthy feature of this part of the scale is the probability that it would facilitate the importation of high shrinking wools from South Africa—a matter of interest and of some importance. The really significant part of the schedule as drawn, however, lies in the region of the wools of the shrinkages most commonly imported to supplement the American wool clip. These wools show an increase in the grease wool duty ranging up to more than two and one-half times the Payne-Aldrich rates.

This is the real weakness in the 33 cent scoured content proposal. It makes the ad valorem equivalent of the duty on these wools mount so high as to become virtually an embargo. (See page 483 for text of Senator Gooding's amendment.)

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### WHO INVENTED THE TERM VIRGIN WOOL?

WHERE, when, and by whom was the term "virgin wool" devised? Is it an old phrase which has been used in the trade for any length of time? or is it a recent invention to aid in the propaganda for compulsory branding legislation? Various answers have been given to these questions, but few of them agree in essential details. Anyone following the statements concerning this comparatively simple matter finds it easy to understand why they get twisted when complex questions arise.

At the hearings given in March, 1920, Mr. Alexander Walker told the House Committee on Interstate and Foreign Commerce:

It may be interesting to the committee to know that before the corporation with which I am connected ever advertised virgin wool fabrics, before they had a trade mark, the term "virgin wool" was used by our friends, the reworked wool shoddy manufacturers. Everyone wondered where the name came from. I have in my hand a booklet entitled *Reworked Wool or Wool Shoddy*, it being a statement to the conservation of woollen by-products, published by the National Association of Wool Fiber Manufacturers of Boston and distributed in May, 1918, at the Grand Central Palace, New York City. (Hearings, p. 434.)

Mr. Lincoln Cromwell, of New York City, who for two years during the war was connected with the Wool Administration in Washington, told the same committee that he "did not hear the words virgin wool at all until they appeared in an advertisement of a single mill in New York, Strong, Hewat & Co. The label was not used and never known at all, and I think was absolutely unintelligible to dealers until this advertising appeared." (House Hearings, p. 200.)

Mr. Joseph E. Davies, former Chairman of the Federal Trade Commission, told the committee that he had "never heard of virgin wool until this morning." (House Hearings, p. 416.)

Mr. W. W. Reynolds, the Ohio wool grower testifying before the Senate sub-committee on June 2, 1921, said:

While I am on that virgin wool business, I want to say something. It has been said and put in print that this National Sheep and Wool Bureau of Chicago invented that name lately for their purposes. Joe Wing of alfalfa fame and H. P. Miller, a veterinary, now a big farmer in Delaware County, Ohio, and I appeared before our Ohio Senate Committee 28 years ago and I used that expression then. There is not enough originality about me to have originated any phrase. So I must have read this some place. I know I never originated the phrase "virgin wool." I could get Henry Miller's affidavit to that because he adopted it right away, and he has been using it ever since. (Senate Hearings, p. 55.)

Mr. Edmund A. Whittier, representing the American Fair Trade League, testified before the Senate Committee as follows:

The term virgin implies purity, superiority, and to require the manufacturer to make all new wool virgin wool is to dignify or recognize that arbitrary term. It is a word that has been established within a comparatively few months, not much over a year ago, by a diligent propaganda, apparently, so that it is used colloquially here all day long in the hearings. . . . To require the manufacturers to adopt that terminology is in our opinion vicious and we believe misbranding. (Senate Hearings, p. 387.)

Mr. John P. Wood, a manufacturer of Philadelphia, supported Mr. Whittier, telling the committee that "virgin wool is a new term in the trade. In an experience of upward of 40 years I never met with the word until the recent advertising which has been associated with the advocacy of this legislation." (Senate Hearings, p. 388.)

Mr. George D. Briggs touched upon this question in his closing address to the Senate Committee, saying:

Now there are certain erroneous statements which have been made by the opponents which I desire to correct.

1. That there is only one firm advertising virgin wool, and that the term virgin wool is a newly coined term.

The advertisements produced to show that more than one firm is advertising virgin wool, most of which were those of clothing retailers, not fabric manufacturers, are all of recent date—ranging from September 30, 1919 to October 30, 1920. Some of the advertisements cited by Mr. Briggs are by concerns that cannot be found in the most recent textile directory, for example, the Howe Woolen Mills, Eaton Rapids, Michigan, the Brownsville Woolen Mills, Portland, Oregon, and the Continental Mills, Inc., Philadelphia, Pa. The advertisements quoted by Mr. Briggs confirm and do not contradict the statement made in October, 1919, by his fellow member of the National Sheep and Wool Bureau, Mr. B. F. Harris, a banker of Champaign, Illinois, and a member of the Board of Governors of the Sheep and Wool Bureau, who at an advertising convention held in Chicago on October 27, 28, and 29, 1919, made a speech, an extract from which, submitted by Alexander Walker to the House Committee and printed on page 442 of the House Hearings, is as follows:

When we talk about "all wool" as we used to, we mean just that. Now some of them get around it by saying "all wool" and we have had to invent the term "virgin wool."

Mr. Harris was a very able man who died a few years ago, and cannot be interrogated as to the author of the phrase or the exact time when it was coined, or invented; but it is evident that it was invented about the time Mr. Alexander Walker was elected president of the National Sheep and Wool Bureau, which was at the annual meeting of 1919. Mr. Harris' statement, of which Mr. Alexander Walker must have known when he addressed the House Committee in March, 1920, was not mentioned when he discussed the origin of the term virgin wool, but was only one among many extracts asked to be printed.

Now to confirm our long held suspicion that the originator or adapter of the term is none other than Mr. Alexander Walker, or his resourceful advertising manager, Briggs, we have the positive assertion in a block paragraph on the cover of the September *Sheep Breeder*, entitled "Virgin Wool Campaign" that Mr. Walker is responsible for it. The words there printed are: "Most persons laughed when Alexander Walker invented the term virgin wool." This statement confirms that of the late Mr. Harris of Champaign. The editor of the *Sheep Breeder* is a member of the Board of Governors of the Sheep and Wool Bureau and we suppose would not knowingly print a misstatement, although in the June *Sheep Breeder* he published the following editorial note:

Colonel Wood, president of the National Association of Wool Manufacturers, says that virgin wool is entirely new to the trade and had never been heard of until the advertising in connection with truth in fabric legislation started. That's the best joke of all.

If the statement of the *Sheep Breeder* for September is to be accepted, what can be said of the editorial note in the June number? The September number confirms Colonel Wood's statement and refutes the implication contained in the editor's words, "That's the best joke of all."

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#### HOW THE WYOMING TEXTILE BRANDING BILL WAS ENACTED.

IN a short editorial in the April Bulletin we referred to the passage by the Legislature of Wyoming of a textile branding law. In the editorial the statement was made that "no hearings were held, the bill was passed unanimously without debate and with record speed."

The accuracy of the statement has been questioned by a reader of the Bulletin, an advocate of the Wyoming bill and also a member of the Board of Governors of the National Sheep and Wool Bureau of America. He writes that our statement that no hearings were held is "absolutely untrue" because "hearings on the Wyoming Truth in Fabric bill were held before House Committee." The statement that the bill was passed without debate, our correspondent writes "is equally untrue if we take the meaning of debate to mean to discuss argumentatively."

Our correspondent suggested that his statements be investigated

for verification and asked that a correction be made if they were found to accord with the facts.

The policy of those who have edited the Bulletin since its first issue has been to strive to be accurate in statement. Never has an intentional misstatement been printed, and when unintentional ones have appeared at rare intervals, they have been acknowledged and corrected at the first opportunity.

Taking advantage of our correspondent's offer we sought the facts, though far removed from Cheyenne; and the result of that investigation secured from two different sources—one connected with the House and the other with the Senate of the Wyoming Legislature—is submitted to our readers who may decide whether we were correct in our original statement, or our correspondent who wrote that "there were hearings held" and that the bill was discussed argumentatively.

In answer to direct questions a member of the House writes that one hearing of which "no notice was given" and at which "nobody in particular" appeared for the bill and no person appeared in opposition to it, was held for "about ten minutes." To the question, Was the bill debated in either the House or Senate?—by debate I mean did some members speak against the bill and attempt to show its defects and disadvantages and some speak for the bill and attempt to show its merits and advantages—he replies, "No, not in the House."

In answer to our inquiry, Were any hearings held by the House Committee to which it was referred, on House bill No. 227? a gentleman connected with the Senate writes: "None that I know of. I believe no hearing was held." He says that the bill was in the hands of the Committee [House Committee on Buildings and Institutions] "less than three days" and that the "only debate in the House was in favor of the bill. Small amendment was adopted. The amendment strengthened the bill." He also writes: "The bill was introduced in House on February 9 by J. C. Underwood. Passed House on February 16. Passed Senate on February 19. Approved by Governor on February 21. In Senate bill was read first time and sent direct to Committee of the Whole. No debate whatever in Senate. After consideration in Committee of Whole rules of Senate were suspended and bill was passed by unanimous vote."

Inasmuch as the bill was in the hands of the Committee less than three days and no hearing was advertised and if one was held it was for "about ten minutes," nobody in particular appearing for the bill and no person in opposition, as our first correspondent



writes, it is not very surprising that the second correspondent says no such hearing was held that "I know of." Such a perfunctory gathering as the one at which no one appeared in opposition to the bill and "nobody in particular" appeared for the bill, can scarcely be called a hearing at which the members of the committee presumed to hear the pros and cons of the case, could get information for the forming of a proper decision. The meeting for "about ten minutes" cannot, by the wildest flight of imagination, be considered a hearing in the generally accepted definition of the word by legislators and those familiar with legislative practice.

Our second correspondent says that there was no opposition to the bill and no testimony was taken. If that was the case, how could the meeting be called a hearing?

Certainly it cannot be said, if the testimony of these witnesses—and they should know what took place—that the bill was debated, "argumentatively disussed," as our protesting reader writes. To have a debate it is necessary to have two sides of the question discussed. A debate implies that one group upholds the affirmative and the other, the negative side of the question. Otherwise there can be no illuminating discussion. In this case both our correspondents are practically agreed that there was no debate in that sense, the member of the House writing in answer to the question, Was the bill debated in either the House or Senate? "No, not in the House," and the Senate correspondent writing "only debate in House was in favor of bill."

In view of the testimony we have produced we believe that our previous statement that no hearings were held and that the bill was passed without debate is in accord with the facts, and that it is factious criticism to declare that "this is absolutely untrue" because "Hearings on the Wyoming Truth in Fabric bill were held before the House Committee," and that it was passed without debate "is equally untrue if we take the meaning of debate to mean to discuss argumentatively."

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### THE SURPLUS OF B.A.W.R.A. WOOL.

THE British Australian Wool Realisation Association has issued the statement given below, showing its stocks of wool as of July 31st, 1921. The last column shows the reduction in the various totals as compared with the similar statement of stocks as of Dec. 31st, 1920.

## STOCKS OF B.A.W.R.A. WOOL AT JULY 31st, 1921.

	U. K.	Antwerp	Australasia or Afloat	Totals	Reduction since Dec. 31st, 1920
	Bales	Bales	Bales	Bales	Bales
Australian—					
Merino:					
Combing . . . . .	402,102	8,278	89,340	499,720	186,289
Clothing . . . . .	44,094	16,241	20,234	80,659	36,396
Carbonising . . .	38,555	15,220	21,906	75,681	19,998
Crossbred:					
Combing:					
Fine . . . . .	175,532	384	80,896	256,812	40,090
Medium . . . . .	99,622	235	88,049	187,906	18,572
Low . . . . .	91,284	217	31,037	122,538	5,844
Clothing:					
Fine . . . . .	8,449	817	29,817	39,083	3,938
Medium . . . . .	4,987	376	32,276	37,649	1,233
Low . . . . .	5,393	315	11,217	16,925	629
Carbonising:					
Fine . . . . .	17,462	1,695	55,799	74,956	5,501
Medium . . . . .	6,611	810	59,586	67,007	6,538
Low . . . . .	8,547	626	20,023	29,196	2,742
Re-Conditioned . .	1,355	....	.....	1,355	....
Totals Australian.	903,993	45,214	540,180	1,489,487	327,770
New Zealand—					
Merino . . . . .	877	—	2,933	3,810	173
Crossbred:					
Combing:					
Fine . . . . .	27,326	....	34,559	61,885	13,583
Medium . . . . .	88,873	100	103,286	192,259	13,654
Low . . . . .	108,409	115	48,616	157,140	.....
Clothing:					
Fine . . . . .	1,613	....	435	2,048	711
Medium . . . . .	5,308	....	1,088	6,396	1,168
Low . . . . .	6,415	....	653	7,068	.....
Slipes . . . . .	71,220	923	71,061	143,204	12,075
Scoured . . . . .	93,604	....	52,182	145,786	10,942
Totals New Zealand	403,645	1,138	314,813	719,596	48,646
Grand Totals	1,307,638	46,362	855,083	*2,209,083	377,391

Commenting on the foregoing table the *Bradford Weekly Wool Chart* of August 25, 1921, said:

An instructive official statement has been issued with regard to the stocks of B.A.W.R.A. wool in hand at 31st July, 1921. A comparison of this statement with the previous one dealing with the

\*2,331 bales Falkland Island wool, included in the grand total for December 31st, 1920, have been also sold.

position at December 31st, 1920, reveals the fact that during the intervening seven months the reduction in stocks has amounted to 377,000 bales, or a little under 15 per cent. Two-thirds of the wool disposed of has been in merino qualities; in fact, no less than one-half has been merino combing wool alone. If merinos and fine crossbreds are taken together, these qualities account for four-fifths of the sales, leaving a meagre one-fifth for medium and low crossbreds, scoureds, and slipes. The position is very clearly shown in the following table, which gives the amounts and percentages of the various qualities in hand at the two dates in question:—

	July 31, 1921		Dec. 31, 1920	
	Stock in Bales	Per Cent	Stock in Bales	Per Cent
Australian merino combing .....	499,720	22.6	686,009	26.6
Australian clothing and car- bonising .....	156,340	7.1	212,734	8.2
New Zealand merinos .....	3,810	0.1	3,983	0.1
Fine crossbreds .....	434,784	19.7	498,607	19.4
Medium crossbreds .....	491,197	22.2	532,382	20.5
Low crossbreds .....	332,867	15.1	338,421	13.3
Slipes, scoureds, and Falklands..	288,990	13.1	314,338	11.9
Total (incl. miscellaneous) ..	2,209,596	100.0	2,586,474	100.0

It will be seen that merinos and fine crossbreds now constitute almost exactly 50 per cent. of the stock.

The Rate of Reduction:—On June 30th, 1920, the total stocks were given as 2,905,554 bales, of which 1,113,259 bales were merino wool; so that during the ensuing thirteen months the total stocks have been reduced by 24 per cent. Merinos, however, have been reduced by 41 per cent., whilst crossbreds have only been reduced 13½ per cent. on a larger figure. The average rate of sales during the first seven months of this year has been about 54,000 bales per month. Merinos have been selling at the rate of about 31,500 bales per month, and crossbreds at the rate of a little over 19,000 bales per month. At this rate merino stocks would be exhausted in about a year and a half, but crossbred stocks would last nearly seven years. Of course, the seven months under review include a period of stagnation, and this illustration is merely given to show the disparity between the sales of the two classes of wool. As a matter of fact, B.A.W.R.A. sales at the last auctions at London, Hull, and Antwerp must have been about 100,000 bales. At this rate, assuming the proportions to be the same, merino stocks would be exhausted in about ten months, and crossbred stocks in just under four years. Probably this estimate errs on the generous side. The fact that merino stocks have been reduced from 1,113,256 bales to 659,870 bales during thirteen months of indifferent trade, however, shows that there is practically no problem to solve with regard to merino wool. Before another year has passed, stocks should have been reduced to such a point that they will exercise no material influence on the market; in fact, the surplus may prove very helpful in eking out supplies at a time of decreased production.

On the other hand, the million and a half bales of crossbred wool represent more than the normal annual production of these classes of wool in the Colonies, and in addition one has to take account of the surplus of the privately-owned clips. The latest statement of stocks tends to emphasise the conclusion previously arrived at by the trade, that the disposal of the crossbred surplus (and especially of medium and low wools) must be a process of some years' duration. The existence of this surplus, however, offers excellent scope for users when trade conditions become more normal. Prices of medium and low crossbreds have now so adjusted themselves to conditions that any further substantial easing would either provoke concerted resistance on the part of holders or tempt speculators to operate. Forties prepared tops, for instance, in the neighbourhood of a shilling are exceedingly cheap when it is borne in mind that wholesale commodities generally are about twice their pre-war prices. On the other hand, demand must develop to a very great extent before it could push up values to any substantial extent in face of such overwhelming stocks. Consequently medium and low crossbreds provide a reservoir of abundant supplies at very low and very stable prices, and it is believed that these favorable influences will eventually lead to a broadening of demand which will go far to solve the difficult problem of the crossbred surplus.

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#### SENATOR GOODING'S PROPOSED AMENDMENT TO SCHEDULE ELEVEN.

ON July 27, calendar day, July 29, Senator Gooding of Idaho, presented to the Senate a certain amendment he intends to propose to the tariff bill when it is considered by the Senate. It was referred to the Committee on Finance and is as follows:

On page 128 strike out lines 9 to 23, both inclusive, and insert the following:

Par. 1101. Wools, not improved by the admixture of merino or English blood, such as Donskoi, native Smyrna, native South American, Cordova, Valparaiso, and other wools of like character or description, and hair of the camel, 10 cents per pound. The duty on such wools imported on the skin shall be 9 cents per pound.

Par. 1102. Wools, not specially provided for, and hair of the Angora goat, alpaca, and other like animals, imported in the grease or washed, shall pay duty at the following rates:

If the shrinkage in cleaning exceeds 93 per centum, 1.6 cents per pound;

If the shrinkage in cleaning exceeds 90 and does not exceed 93 per centum, 2.6 cents per pound;

If the shrinkage in cleaning exceeds 87 and does not exceed 90 per centum, 3.6 cents per pound;

If the shrinkage in cleaning exceeds 84 and does not exceed 87 per centum, 4.6 cents per pound;

If the shrinkage in cleaning exceeds 81 and does not exceed 84 per centum, 5.6 cents per pound;

If the shrinkage in cleaning exceeds 78 and does not exceed 81 per centum, 6.6 cents per pound;

If the shrinkage in cleaning exceeds 75 and does not exceed 78 per centum, 7.6 cents per pound;

If the shrinkage in cleaning exceeds 72 and does not exceed 75 per centum, 8.6 cents per pound;

If the shrinkage in cleaning exceeds 69 and does not exceed 72 per centum, 9.6 cents per pound;

If the shrinkage in cleaning exceeds 66 and does not exceed 69 per centum, 10.6 cents per pound;

If the shrinkage in cleaning exceeds 63 and does not exceed 66 per centum, 11.5 cents per pound;

If the shrinkage in cleaning exceeds 60 and does not exceed 63 per centum, 12.5 cents per pound;

If the shrinkage in cleaning exceeds 57 and does not exceed 60 per centum, 13.5 cents per pound;

If the shrinkage in cleaning exceeds 54 and does not exceed 57 per centum, 14.5 cents per pound;

If the shrinkage in cleaning exceeds 51 and does not exceed 54 per centum, 15.5 cents per pound;

If the shrinkage in cleaning exceeds 48 and does not exceed 51 per centum, 16.5 cents per pound;

If the shrinkage in cleaning exceeds 45 and does not exceed 48 per centum, 17.5 cents per pound;

If the shrinkage in cleaning exceeds 42 and does not exceed 45 per centum, 18.5 cents per pound;

If the shrinkage in cleaning exceeds 39 and does not exceed 42 per centum, 19.5 cents per pound;

If the shrinkage in cleaning exceeds 36 and does not exceed 39 per centum, 20.5 cents per pound;

If the shrinkage in cleaning exceeds 33 and does not exceed 36 per centum, 21.4 cents per pound;

If the shrinkage in cleaning exceeds 30 and does not exceed 33 per centum, 22.4 cents per pound;

If the shrinkage in cleaning exceeds 27 and does not exceed 30 per centum, 23.4 cents per pound;

If the shrinkage in cleaning exceeds 24 and does not exceed 27 per centum, 24.4 cents per pound;

If the shrinkage in cleaning exceeds 21 and does not exceed 24 per centum, 25.4 cents per pound;

If the shrinkage in cleaning exceeds 18 and does not exceed 21 per centum, 26.4 cents per pound;



If the shrinkage in cleaning exceeds 15 and does not exceed 18 per centum, 27.4 cents per pound;

If the shrinkage in cleaning exceeds 12 and does not exceed 15 per centum, 28.4 cents per pound;

If the shrinkage in cleaning exceeds 10 and does not exceed 12 per centum, 29.4 cents per pound;

If the shrinkage in cleaning does not exceed 10 per centum, 33 cents per pound;

The duty on such wools, imported in the scoured state, shall be 33 cents per pound;

The duty on such wools, imported on the skin, shall be 1 cent less per pound than is imposed in this paragraph on other wools of the same class and condition.

(For grease wool equivalents of these duties, see page 474.)

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### GREAT LOSSES IN ALL INDUSTRIES ARE THE AFTERMATH OF THE WAR.

IF the use of unidentified shoddy or reworked wool has brought about the low prices for wool and is the "arch enemy" of the wool grower, as one indignant Ohio wool official is wont to assert, why is it that the same stagnation, declines, and losses were to be found in the copper, wheat, leather, sugar industries and many others? If the use of unidentified shoddy has enabled manufacturers, as these advocates have repeatedly, unblushingly, and falsely asserted, to sell fabrics containing reworked wool at virgin wool prices, how came it that the year 1920 proved so disastrous to one large group of worsted mills, changing a surplus of \$3,894,350 at the close of 1919 to a deficit of \$4,534,527 a year later?

Commenting in his report on the year's business, President Adie of the United States Worsted Company, enumerated some of the causes which brought about the unexpected and unexampled losses to the Company. He said:

The first six months of the year was a period of high and rapidly advancing prices with large demand and good profits. The last six months was a period of rapidly falling prices, no demands and very small sales, aggravated by heavy cancellations, returns, and repudiations of orders, together with heavy losses upon everything included in our inventory taken at the end of the year at the then prevailing prices.

The profits of the first six months have been swallowed up by losses in inventory and overhead charges caused by the shutting down of our mills and in addition, a most serious deficit has been created. Such sensational changes in one year have never been experienced in the history of the textile industry. The present situa-

tion is most difficult. There is no basis of prices for either buying or selling, and new business is restricted by an apparent lack of confidence. All the company's mills have been shut down for a considerable period and it is only recently that we have started up a part of our machinery. The prospects are somewhat brighter since the beginning of the year.

But textile corporations are not alone in their heavy losses during the most unusual year of 1920. The shoe and leather trades have been equally heavy losers. In 1920 the Central Leather Company piled up a loss of \$25,750,000 and in the first quarter of the present year additional price declines were registered which caused still further depreciation in the value of stocks carried. Surely these losses were not caused by the use of unidentified shoddy.

The American Sugar Refining Company showed a loss of \$10,686,281 in 1920 as compared with a profit of \$13,250,619 in 1919. And in this industry an investigation of prices for over one hundred years, including the years of the Mexican and Civil Wars, did not reveal a fluctuation in prices half so great as that experienced in 1920.

Nor is the wool-growing industry the only one in the country wherein there was "stagnation" and where large surplus stocks produced at high cost could be found. Nearly all the copper mines of the country, which were highly successful during the war, passed or greatly reduced their dividends, and mines producing 60 per cent of the country's production were forced to cease operations and to close down their plants. So great was the accumulation of copper stocks that all the copper mines of the country could have shut down in the early summer for the remainder of the year before the existing surplus could be consumed.

From the foregoing quotations it is evident that textile manufacturers lost heavily during 1920 at the same time that the wool growers lost money, because their production costs were extremely heavy, more than the prices they realized from their products. It is also evident that the use of unidentified shoddy or reworked wool had nothing to do with the losses of the wool growers or the losses of the wool manufacturers. Did we accept the assertions at face value that manufacturers are able to sell and by the use of reworked stock, do sell fabrics which contain it at prices obtained for fabrics made from new wool and thereby make undue and unfair profits, we would have expected manufacturers to make all profits and no losses during 1920.

Those losses were the aftermath of the Great War which shook the financial system of the world and paralyzed the buying ability

of many nations which before the war were reckoned among the strongest and most substantial.

The Paris correspondent of the *Manchester Guardian* writing on March 26 of the French textile industry declared that it "is at present passing through what is probably one of the most critical periods in its history and it may be said without hesitation that manufacturers are at their wits' end to devise means to surmount the difficulties that face them. . . . Manufacturers complain that when prices were at the highest they were urged by the Government, in view of the general critical economic situation to keep their mills running in order to provide employment. The buying capacity of the consumer ultimately became exhausted and, notwithstanding an almost unlimited demand for textiles of every kind, the public were unable to satisfy their requirements owing to the impossibly high prices that manufacturers and retailers were both compelled to ask."

There are many causes for the stoppage of trade and the greatly reduced prices offered for raw materials and finished products. But the greatest and most fundamental cause is the economic exhaustion of many European countries and the poverty of both individuals and nations who have neither goods nor gold to give for commodities of which they stand in need.

Recently analyzing the conditions which have resulted in the tremendous trade slump throughout the world Sir George Paish, the English statistician, attributed it to the cessation of credit facilities, purchasing power having gone down because credit was not available, and because the productive power of Europe did not enable European countries to purchase the normal quantity of goods. In fact the purchasing power of the world is subnormal, and until the effects of the titanic four-year struggle have been more overcome than at present, the world's industries cannot prosper as they were wont to do in the years before August, 1914.

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#### WHY LOSSES WERE SUFFERED BY HOLDING CROPS AND CLIPS.

ACCORDING to the secretary of the California rice growers the heavy losses suffered by the Coast industry was due to the hoarding of the crop. Growers had the opportunity to export their rice last year, but failing to see the handwriting on the wall, held for higher prices which were never realized.

"If the rice growers had sold their 1920 crop at the time the millers, exporters, and brokers urged them to sell," Secretary Robert Mason said last February, "they would not have the acute situation

in respect to that industry that at this time prevails. As early as last October the California rice growers were urged to dispose of their crop as quickly as harvested, but they preferred to hoard it. We had the opportunity of exporting California rice during the months of October, November, and December of 1920. This was rendered possible on account of the foreign rices not being available in large quantities before the first of the year. . . . Unfortunately the growers' ideas were very high and so out of time that it was impossible to secure the business at the time it was possible for us to do so."

The wool growers of Argentina followed a like fatuous course. According to an article published in *La Nacion* entitled "The Wool Problem" and signed by Señor Felix S. Madrid, a well-known Argentine gentleman who is largely interested in the subject, the Argentine estancieros, by holding the bulk of their 1918 and 1919 clip, lost in round figures £8,000,000—a loss he attributes solely to greed. To the large rancher, wool was regarded as an extra source of revenue in pre-war days. Then came the extraordinary prices of 1916, and 1917-1918 when to quote Señor Madrid,

The growers obstinately held to their stocks in the expectation of prices which they assigned to the staple by pure caprice. It is difficult to understand how the estancieros and consignees fell into such error, seeing that inasmuch as Argentina is in no sense a market exercising a control over prices we were bound to conform to the laws of supply and demand. Being however, "bulls" by temperament and working on purely individual lines we all began to speculate for the rise, no price being quite good enough to warrant sales. Thus it was that our wool growers, their appetites whetted by the ambition that blinds the most expert, behaved like greedy children, ever asking more and more. Disregarding all logic, they refused offers that would have meant stupendous profits during 1918-1919.

In the United States the same unfortunate tendency to hold for higher prices was evident. Prices were refused in the early months of 1920 which, if accepted by the growers would have caused the purchasers heavy losses. Wool growers followed the mistaken advice of their leaders who misjudged the signs of the times in supposing that higher instead of lower prices would rule the market in the later months of the year. It is generally known that wool growers of the West were urged "to resist any attempts of the buyers to force prices down below a level that can be considered fair to the grower," and they were advised that they "ought to get anywhere from 65 to 80 cents a pound for their wool during the coming season according to grade, staple, and character of the wool." A Montana banker predicted that "there will be a substantial ad-

vance in wool prices. Wool will sell from 60 cents up this year. I won't predict what the top prices for wool will be, but I will make this prediction, wool prices generally will be on a basis of from 15 to 16 per cent higher than they were for 1919, and the grower who is induced to contract at a price lower than that would mean is losing money for himself."

As late as June 23, 1920, when the cancellations of orders were being made on an immense scale, mills were closing for lack of orders, and consumption of wool was rapidly dwindling, the American Farm Bureau Federation issued a letter, the third paragraph of which read: "The important point now is to urge upon all wool growers not to sell at this time. There is no sound reason why the present depression should continue, and with confidence restored through the financing plan adopted recovery of the market should be rapid."

Attention to this prediction was recently called by the editor of *The National Stockman and Farmer* who wrote: "The intentions of the Federation were good, its efforts to finance wool were creditable, and its prophecy was not any farther from the truth than some others made at the same time. We quote it merely to illustrate the pitfalls of prophecy and to remind some present-day prophets of them."

From the foregoing quotations it must be evident that the producers of raw materials—the rice growers of California and the wool growers of Argentina and the United States—followed a wrong policy and mistaken leaders when they disregarded the evident tendency of the times and held their products for a rising market. They had an opportunity to sell at what later seemed high prices, and to shift losses to other shoulders. That they neglected to do this cannot be attributed to others and responsibility for heavy losses, due to a great drop in prices can fairly be placed upon the shoulders of the producers and their advisers, grievous and regrettable as those losses were.

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#### THE DECREASE OF ANGORA GOATS IN SOUTH AFRICA.

ACCORDING to an item from the *Board of Trade Journal* published in the *Daily Commerce Reports* of July 13, 1921, page 218, it is stated that "representatives of the mohair growers of South Africa met recently at Port Elizabeth and asked the Government to assist the industry to the extent of a 50 per cent advance on the clip value based on 1914 prices." Then touching on the fluctuations in value of mohair and the decrease in flocks, the article continues:



Mohair has been more subject to fluctuations than wool prices in the past, having ranged from 4s. 1d. a pound in 1870 to 1s. 3d. in 1903 and these variations have kept the flocks down. In 1912 the numbers reached their highest at 4,395,101; since when the decline has been steady to 2,696,670 in 1919.

Here is a commodity for which prices have declined 70 per cent since 1870 and the flocks have dwindled over 50 per cent since 1912, a decline which makes the decrease in this country's sheep population look small. Will Mr. Alexander Walker, Mr. George D. Briggs, Mr. W. W. Reynolds, Representative French, and the supporters of the compulsory branding bill rise up and assert that the decrease of Angora goats in South Africa and the wide fluctuations in the prices for mohair are and have been due to the use of "unidentified shoddy that has driven the goats from thousands of hills and valleys," as they assert respecting sheep in this country? Such assertion would be quite in line with the bold declarations made before Congressional Committees and their communications issued and intended for consumption by an uninformed and credulous public. If the use of unidentified shoddy has caused, as these gentlemen assert, a decrease in the sheep flocks of this country, will they tell us what has caused the greater decrease in the goat flocks of South Africa and a still wider fluctuation of mohair prices?

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## WOOL-FELT AND FUR-FELT HAT INDUSTRY.

### CENSUS BUREAU'S SUMMARY FOR 1919 AND 1914.

THE following is the preliminary statement issued by the Census Department of the results of the census of 1919 with reference to the wool-felt and fur-felt industry:—

Reports were received from 216 establishments engaged in the manufacture of Wool-felt and Fur-felt Hats in 1919 and their products for the year were valued at \$6,740,000 and \$82,745,000 respectively.

Considering these industries combined, 27 states reported the manufacture of felt hats. There were 43 establishments in New York, 42 in Connecticut, 34 in New Jersey, 30 in Pennsylvania, the remaining 23 states reporting a small number of establishments ranging from 1 to 8 in each state.

The statistics for 1919 and 1914 are summarized in the following statement. The figures for 1919 are preliminary and subject to such change and correction as may be necessary from further examination of the original reports.

## COMPARATIVE SUMMARY OF STATISTICS FOR 1919 AND 1914 CONCERNING THE WOOL-FELT HAT AND FUR-FELT HAT INDUSTRIES.

	1919	1914
<i>Wool-Felt Hats</i>		
Number of establishments .....	40	30
Value of products .....	\$6,740,000	\$1,944,000
Finished hats:		
Quantity (dozens) .....	402,000	381,000
Value .....	\$5,410,000	\$1,777,000
Hat bodies in the rough:		
Quantity (dozens) .....	104,000	6,000
Value .....	\$165,000	\$13,000
All other products, including contract work	\$1,165,000	\$154,000
<i>Fur-Felt Hats</i>		
Number of establishments .....	176	223
Value of products .....	\$82,745,000	\$37,350,000
Finished hats:		
Quantity (dozens) .....	2,100,000	2,119,000
Value .....	\$71,069,000	\$33,604,000
Hat bodies in the rough:		
Quantity (dozens) .....	518,000	329,000
Value .....	\$7,657,000	\$2,373,000
All other products, including contract work..	\$4,019,000	\$1,373,000

UNTIL CONFIDENCE AND CREDIT ARE RESTORED  
LITTLE IMPROVEMENT CAN BE EXPECTED.

COMMENTING on a speech by Prime Minister Hughes of Australia, made in August to a Bradford audience, in which he pointed out, when touching upon the interests of growers and buyers, that the interests of buyers and sellers are "never quite so identical as might be imagined" (which is true only in a narrow sense), the *Bradford Wool Record and Textile World* recently made some comments on the relations between the two interests which are so applicable to conditions in the United States, that we quote from the article to re-enforce what this Bulletin has been telling the wool growers for many years.

After saying that "it is sound business to buy in the cheapest market and sell in the dearest, and this principle must always be the guiding one if trade is to be conducted on normal and rational lines," the editorial says that "there is another aspect of the question in which the interests of wool growers and wool users are identical. The latter can only buy the raw material and convert it into goods so long as there is a market for the finished articles. If the outlet

for the goods is restricted from any cause, the manufacturers must curtail their buying with the inevitable result that the wool is left in the hands of the growers. If, therefore, we take the broad view, we find that the interests of growers and users are identical in the long run, and those interests depend absolutely upon the ability or otherwise of the general public at home and abroad to purchase textiles. And there we have the key to the present position. Millions of people in the world are to-day unable to buy necessary clothing simply because they cannot pay for the articles required. As a direct result of this curtailment of the market for cloth, machinery is idle which should be fully occupied, and wool is steadily accumulating in all the producing countries. It is not a question of cheap or dear wool—though the cheaper the raw material and the lower the conversion costs, the greater the chance of finding a market for the manufactured goods—it is a question of re-establishing confidence and international credit, and until that can be done there is little prospect of any material improvement in trade. There can be no greater fallacy than to imagine that members of the wool textile industry in this country desire to see wool prices reduced to a level at which the grower is out of pocket. As we repeatedly stated, the buyer can only afford to pay a price which will enable him to handle the raw material at a profit, and for this reason we have consistently advocated the removal of all forms of artificial restrictions which have been imposed with the idea of maintaining values. The law of supply and demand must be allowed to operate. At the present time the British-Australian Wool Realisation Association are holding thousands of bales of wool which could have been sold at a handsome profit when the trade was clamouring for wool, and that material, along with other accumulations, is a menace to-day.”

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#### MEMBERS OF WYOMING WOOL GROWERS ASSOCIATION NOT INTERESTED IN WOOLEN MILLS.

IN our *Annual Wool Review*, which is designed to include each year all available material of value to future students of the industry, it was stated not on our authority but on a press dispatch that “In Wyoming it was announced in October that after working secretly for two months well-known sheep men, all members of the Wyoming Wool Growers Association, have completed the ground work for the construction and operation of woollen mills,” etc. While the statement quoted was made at the time stated, we gladly

print what a man prominently connected with the Wyoming Wool Growers Association writes us to the effect that as far as he is able to learn, "No one connected with the manufacturing proposition referred to was or ever has been a member of the Wyoming Wool Growers Association. None of our officers or Executive Committee knew anything then, nor do they now, concerning the plan in operation."

It was the existence of the plan for the project rather than the men behind it which we desired to record, and we congratulate the Wyoming Wool Growers Association on having an Executive Committee whose members had the good judgment to refrain from so futile and uncertain an enterprise which could gain supporters only in times of distress and low prices for wool.

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#### WOOL WASTES FREE UNDER THE EMERGENCY TARIFF LAW.

UNDER the terms of the Emergency tariff law a number of questions have arisen concerning the admission of wool wastes and their proper classification, and the admission of wools of Class III.

The ruling respecting wool wastes was made by Assistant Secretary of the Treasury, James H. Moyle, in a communication to the collector of customs at New York City under date of July 20, 1921. In that letter of instructions which is T. D. 38798, published in Treasury Decisions for July 28, 1921, Mr. Moyle wrote as follows:

The Department refers to your letter of June 17, 1921, relative to the classification of wool wastes under the Emergency Tariff Act.

Paragraph 19 of the said act reads:

Wool and hair of the kind provided for in paragraph 18, when advanced in any manner or by any process of manufacture beyond the washed or scoured condition, and manufactures of which wool or hair of the kind provided for in paragraph 18 is the component material of chief value, 45 cents per pound in addition to the rates of duty imposed thereon by existing law.

Paragraph 18 provides for duty on wool as follows:

Wool, commonly known as clothing wool, including hair of the camel, angora goat, and alpaca, but not such wools as are commonly known as carpet wools: Unwashed, 15 cents per pound; washed, 30 cents per pound; scoured, 45 cents per pound. . . . On wool and hair provided for in this paragraph, which is sorted or increased in value by the rejection of any part of the original fleece, the duty shall be twice the duty to which it would otherwise be subject, but not more than 45 cents per pound.

The matter of the classification of wool wastes has been given careful consideration, and the Department has reached the conclusion that they are not dutiable under paragraph 19 of the act mentioned, as they are not, in the opinion of the department, wool advanced or manufactures of wool within the meaning of the terms as used in the said paragraph.

Many of the wastes, however, are wool and are used as such and the question arises whether they are dutiable as wool under paragraph 18.

There are various decisions to the effect that a waste, which is commercially suitable for the same purpose as the material of which it is a by-product, is subject to the same classification as the product itself. (T. D. 30044, clippings of dressed fur; T. D. 30143, clippings of undressed fur; T. D. 38727, worn jute bags. See also T. D. 31277, cotton linters, and T. D. 33277, jute waste.) Furthermore, the Department is of the opinion that it was the intention of Congress in imposing a duty on wool in paragraph 18, to cover all wool of the character described in the paragraph that is commercially suitable for use as wool in its condition as imported.

It is the opinion of the Department, therefore, that top wastes, slubbing waste, roving waste, broken tops, garnetted wastes, noils, shoddy, mungo, carbonized wool and carbonized wastes and all similar wastes of wool, commonly known as clothing wool, including the hair of the camel, angora goat, and alpaca, in fiber form are subject to duty under paragraph 18 of the Emergency Tariff Act, and that as they are in the condition of scoured wool or used in the same manner as such wool, they are dutiable at the rate of 45 cents per pound as scoured wool or wool sorted or increased in value by the rejection of part of the original fleece under the said paragraph.

Yarn waste and thread waste and similar wastes of wool, not reduced to fiber form, but requiring further manipulation to bring them to a stage suitable for use as wool, are, in the opinion of the Department, free of duty as wool wastes not specially provided for under paragraph 651 of the Tariff Act of 1913.

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#### CARPET WOOLS FREE UNDER EMERGENCY TARIFF LAW.

THE other question about the classification of wools of Class III under the Emergency tariff law was decided by Assistant Secretary Edward Clifford in a communication to collectors under date of July 26, 1921. He reached the conclusion that the use of some wools of Class III in the manufacture of wool fabrics is not sufficient to cause them to be commonly known as clothing wools. The decision, No. 38807, as printed in Treasury Decisions of August 4, 1921, is as follows:



TREASURY DEPARTMENT, *July 26, 1921.*

SIR: The department refers to your letter of the 9th instant, transmitting reports of the appraiser relative to the classification of wool under paragraph 18 of the Emergency Tariff act.

The paragraph provides as follows:

Wool, commonly known as clothing wool, including hair of the camel, angora goat, and alpaca, but not such wools as are commonly known as carpet wools: Unwashed, 15 cents per pound; washed, 30 cents per pound; scoured 45 cents per pound. Unwashed wools shall be considered such as shall have been shorn from the animal without any cleaning; washed wools shall be considered such as have been washed with water only on the animal's back or on the skin; wools washed in any other manner than on the animal's back or on the skin shall be considered as scoured wool. On wool and hair provided for in this paragraph, which is sorted or increased in value by the rejection of any part of the original fleece, the duty shall be twice the duty to which it would otherwise be subject, but not more than 45 cents per pound.

Extensive investigations have been made by the department as to what wools are commonly known as clothing wool and what are commonly known as carpet wool.

It has been represented to the department that in excepting wool commonly known as carpet wool, Congress intended to exempt all wools provided for under the tariff acts of 1897 and 1909 as wools of the third class, these being of the kind ordinarily used in carpet making. On the other hand, it is shown that for some time past various wools of the third class have been used to a very great extent in the manufacture of clothing.

After careful consideration of all the evidence submitted, the department is of the opinion that the use of the class 3 wools in clothing is not sufficient to cause them to be commonly known as clothing wools; and that wools of classes 1 and 2 of the acts of 1897 and 1909, including the hair of the camel (except Russian), angora goat, and alpaca, are dutiable as wool commonly known as clothing wool under paragraph 18 of the emergency tariff act, while wools of class 3 of the acts of 1897 and 1909, including Russian camel's hair, are free of duty under paragraph 650 of the tariff act of 1913. See T. D. 22681 and 30786 for list.

Hair of the cashmere goat, llama, vicuna, and other like animals not especially enumerated in the said paragraph 18, will, however, continue to be assessed with duty at the rate of 15 per cent ad valorem under paragraph 305 of the tariff act of 1913.

You will be governed in accordance with the foregoing.

Respectfully,  
(86689.)

EDWARD CLIFFORD,  
*Assistant Secretary.*

COLLECTOR OF CUSTOMS, *New York.*

## Statistics for Third Quarter, 1921.

### ACTIVE AND IDLE MACHINERY, AS OF JULY, AUGUST, AND SEPTEMBER, 1921.

AS REPORTED BY THE BUREAU OF THE CENSUS,  
UNITED STATES DEPARTMENT OF COMMERCE.

THE report for the last quarter does not show a steady gain, as did that for the immediately preceding three months. This was due in part to a seasonal slowing down in August between the two seasons and does not seem to be a symptom of anything but a temporary retrogression. There was a considerable increase of idleness all along the line in the figures as of August 1 when compared with those for July 1.

The figures for August 1 showed 3.3 per cent more broad looms idle than on July 1; 3.3 per cent more of narrow looms; 2.7 per cent more cards; 8.5 per cent more combs; 1.8 per cent more woolen spinning spindles, and 7.7 per cent of worsted spinning spindles. The carpet and rug machinery was .5 per cent worse than on July 1. While the figures for September 1 show a partial recovery they still indicate less activity than two months earlier, the broad looms being 5.8 per cent; the narrow looms 4.7 per cent; the cards 3.2 per cent; the combs 4.7 per cent; the woolen spinning spindles 3 per cent, and the worsted spinning spindles 4 per cent less active than they were as of July 1. On the other hand, the carpet machinery, due in part to the settlement in many mills of the weavers' strike, showed an increase in activity of 15.3 per cent over August 1 and 10.3 per cent over July 1, 1921, and the worsted spinning spindles showed an improvement of 2.8 per cent over August 1.

July 1, 1921.

*Summary of Reports of 918 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	51,008	13,776	4,230	5,299	2,210	1,828,621	2,132,094
Idle . . . . .	11,748	4,637	4,347	1,438	274	471,429	230,420
Total . . . .	62,756	18,413	8,577	6,737	2,484	2,300,050	2,362,514

August 1, 1921.

*Summary of Reports of 916 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	49,413	13,330	4,273	5,160	2,157	1,802,334	2,052,481
Idle . . . . .	12,650	4,789	4,345	1,532	313	506,200	314,042
Total . . . .	62,063	18,119	8,618	6,692	2,470	2,308,534	2,366,523

September 1, 1921.

*Summary of Reports of 918 Manufacturers.*

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
In Operation . .	48,431	13,039	5,198	5,179	2,136	1,788,466	2,148,169
Idle . . . . .	13,629	5,180	3,427	1,529	427	517,357	226,800
Total . . . .	62,060	18,219	8,625	6,708	2,563	2,305,823	2,374,969

# 498 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

## Percentage of Idle Machinery to Total Reported.

Sept. 1, 1921 . .	22.0	28.4	39.7	22.8	16.7	22.4	9.5
Aug. 1, 1921 . .	20.4	26.4	50.4	22.9	12.7	21.9	13.3
July 1, 1921 . .	18.7	25.2	50.7	21.3	11.0	20.5	9.8
June 1, 1921 . .	20.5	25.2	58.0	21.6	10.9	20.6	10.1
May 2, 1921 . .	26.2	28.7	53.6	23.3	14.2	23.8	12.9
April 1, 1921 . .	36.1	34.4	56.2	33.0	18.7	32.3	21.8
March 1, 1921 . .	43.1	41.7	60.5	46.2	28.3	47.2	33.0
Feb. 1, 1921 . .	53.9	48.7	49.7	56.5	43.8	58.9	43.0
Jan. 1, 1921 . .	57.0	49.2	45.7	58.1	52.9	59.4	50.8
Dec. 1, 1920 . .	51.2	44.8	40.1	50.3	41.4	51.7	42.7

## Number of Machines in Operation Per Shift Beginning January 1, 1921.

Sept. 1, 1921:							
Single shift,	46,281	12,964	5,149	4,781	1,584	1,652,729	2,021,764
Double shift,	2,150	75	49	398	552	135,737	126,405
Aug. 1, 1921:							
Single shift,	47,440	13,264	4,224	4,749	1,745	1,662,734	1,939,468
Double shift,	1,973	66	49	411	412	139,600	113,013
July 1, 1921:							
Single shift,	48,532	13,704	4,176	4,828	1,734	1,683,713	2,006,769
Double shift,	2,467	72	54	471	476	144,651	125,325
June 1, 1921:							
Single shift,	47,532	12,512	3,978	4,810	1,627	1,686,123	2,000,149
Double shift,	1,853	88	49	419	573	137,651	128,680
May 2, 1921:							
Single shift,	44,276	12,794	3,916	4,588	1,617	1,613,780	1,932,413
Double shift,	1,585	. . . . .	47	360	478	125,823	119,976
April 1, 1921:							
Single shift,	38,363	11,821	3,622	4,253	1,615	1,465,120	1,758,265
Double shift,	1,396	. . . . .	41	223	367	83,659	88,584
March 1, 1921:							
Single shift,	33,595	10,440	3,367	3,427	1,486	1,162,494	1,521,368
Double shift,	1,799	. . . . .	39	148	257	54,469	63,388
Feb. 1, 1921:							
Single shift,	27,510	9,309	4,272	2,785	1,129	922,766	1,281,316
Double shift,	1,377	. . . . .	40	85	216	22,173	46,544
Jan. 1, 1921:							
Single shift,	26,124	9,191	4,655	2,639	931	884,949	1,100,620
Double shift,	446	. . . . .	59	144	153	42,427	51,770
Dec. 1, 1920:							
Single shift,	29,528	9,957	5,063	3,139	1,190	1,050,640	1,297,701
Double shift,	649	. . . . .	58	176	218	52,963	35,500

## ACTIVE AND IDLE MACHINERY.

499

Active and Idle Machine and Spindle Hours.

	Looms.			Sets of Cards.	Combs.	Spinning Spindles.	
	Wider than 50 inch Reed Space.	Under 50 inch Reed Space.	Carpets and Rugs.			Woolen.	Worsted.
Sept. 1, 1921:							
Active . . .	10,802,203	2,746,588	1,075,640	1,171,171	525,717	403,946,503	464,983,523
Idle . . . .	3,286,366	1,236,431	799,479	312,576	50,886	108,814,816	60,299,836
Aug. 1, 1921:							
Active . . .	10,122,436	2,637,254	751,900	1,102,220	460,697	385,069,879	415,010,160
Idle . . . .	2,659,914	1,108,000	1,035,515	285,142	66,573	96,059,667	69,040,128
July 1, 1921:							
Active . . .	10,955,729	2,924,600	862,199	1,178,154	524,181	406,535,415	473,761,260
Idle . . . .	2,316,174	1,044,940	968,007	257,482	22,650	90,021,527	33,326,100
June 1, 1921:							
Active . . .	10,296,047	2,662,740	784,966	1,132,253	544,136	394,300,649	439,182,833
Idle . . . .	2,564,921	1,147,682	995,728	276,314	7,767	90,021,527	50,813,864
May 2, 1921:							
Active . . .	9,589,287	2,407,624	685,530	1,056,351	511,485	373,822,549	422,725,464
Idle . . . .	3,466,314	1,401,231	1,117,134	351,540	29,059	111,053,354	65,839,925
April 1, 1921:							
Active . . .	8,339,925	2,070,627	668,413	952,427	474,832	334,183,014	384,756,157
Idle . . . .	5,169,386	1,859,737	1,205,236	531,869	60,539	172,833,614	133,084,420
March 1, 1921:							
Active . . .	6,605,552	1,536,665	618,029	660,852	350,173	228,390,721	285,071,955
Idle . . . .	5,475,549	2,043,101	1,092,370	676,151	124,130	233,455,365	174,054,918
Feb. 1, 1921:							
Active . . .	5,120,762	1,309,307	644,828	492,553	240,400	167,838,013	215,102,563
Idle . . . .	7,692,284	2,620,214	1,119,997	886,376	250,428	304,638,487	265,976,086
Jan. 1, 1921:							
Active . . .	4,543,949	1,145,890	787,770	488,789	193,221	157,503,237	176,887,155
Idle . . . .	9,089,433	2,835,281	1,059,615	953,372	327,860	341,621,140	330,813,646
Dec. 1, 1920:							
Active . . .	5,194,419	1,490,748	942,368	597,452	239,272	198,552,216	218,409,778
Idle . . . .	7,701,531	2,272,927	808,414	794,179	249,093	232,560,878	250,684,315

Percentage of Idle Hours to Total Reported.

Sept. 1, 1921 . .	23.3	31.0	42.6	21.1	8.8	21.2	11.5
Aug. 1, 1921 . .	20.8	29.6	57.9	20.6	12.6	20.0	14.3
July 1, 1921 . .	17.5	26.3	52.9	17.9	4.1	18.2	6.6
June 1, 1921 . .	19.9	30.1	55.9	19.8	1.4	18.6	10.4
May 2, 1921 . .	26.6	36.8	62.0	25.0	5.4	22.9	15.5
April 1, 1921 . .	38.3	47.3	64.3	35.8	11.3	34.1	25.7
March 1, 1921 . .	45.3	57.1	63.9	50.6	26.2	50.5	37.9
Feb. 1, 1921 . .	60.0	66.7	63.5	64.3	51.0	64.5	55.3
Jan. 1, 1921 . .	66.7	71.2	57.4	66.1	62.9	68.4	65.2
Dec. 1, 1920 . .	59.7	60.4	46.2	57.1	51.0	53.9	53.4



## WOOL STOCKS AND CONSUMPTION.

BELOW is the report of the United States Department of Agriculture showing the quantity of wool on hand in the United States as of June 30, 1921. This statement is issued quarterly by the Department, and corresponding statements for previous quarters were published in earlier numbers of the BULLETIN. These figures taken in connection with the Government monthly reports of wool consumed and of the Active and Idle Machinery Reports give a very clear idea of the condition of the industry from time to time.

WOOL STOCKS, JUNE 30, 1921, AS REPORTED BY DEALERS, MANUFACTURERS,  
AND THE UNITED STATES GOVERNMENT.

As Reported by Dealers and Manufacturers.	Held by		Total.	Estimated Equivalent Grease Wool.	Held by Government.	
	Dealers.	Manu- facturers.				Estimated Equivalent Grease Wool.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Grease Wool:						
Domestic . . . . .	88,139,000	33,714,000	121,853,000			
Foreign . . . . .	56,697,000	78,720,000	135,417,000			
Total . . . . .	144,836,000	112,434,000	257,270,000	257,270,000	53,391,000	33,391,000
Scoured Wool:						
Domestic . . . . .	11,238,000	10,520,000	21,758,000			
Foreign . . . . .	16,725,000	12,558,000	29,283,000			
Total . . . . .	27,963,000	23,078,000	51,041,000	102,082,000	8,783,000	17,566,000
Pulled Wool:						
Domestic . . . . .	8,058,000	4,914,000	12,972,000			
Foreign . . . . .	7,149,000	1,848,000	8,997,000			
Total . . . . .	15,207,000	6,762,000	21,969,000	29,292,000	2,615,000	3,486,000
Total grease, scoured, and pulled . . . . .						
Tops . . . . .	4,883,000	20,247,000	25,130,000	50,260,000		
Noils . . . . .	4,139,000	8,101,000	12,240,000	24,480,000		
Grease equivalent of all wool reported above, . . . . .				463,384,000		54,443,000
Estimated grease equiv- alent of all wool re- ported held by deal- ers, manufacturers, and the U. S. Govern- ment June 30, 1921, . . . . .						517,827,000

## WOOL CONSUMED BY MONTHS.

JUNE, 1921.

		In Grease.	
In grease.....	43,245,000 pounds	=	43,245,000 pounds.
Scoured.....	6,242,000 "	=	12,484,000 "
Pulled .....	2,897,000 "	=	3,862,000 "
		<hr/>	
Total .....	52,384,000 "	=	59,591,000 "

JULY, 1921.

		In Grease.	
In grease....	33,022,000 pounds	=	38,022,000 pounds.
Scoured.....	5,923,000 "	=	11,846,000 "
Pulled .....	2,406,000 "	=	3,208,000 "
		<hr/>	
Total .....	46,351,000 "	=	53,176,000 "

AUGUST, 1921.

		In Grease.	
In grease.....	42,524,000 pounds	=	42,524,000 pounds.
Scoured.....	6,283,000 "	=	12,566,000 "
Pulled .....	2,378,000 "	=	3,170,000 "
		<hr/>	
Total .....	51,185,000 "	=	58,260,000 "

QUARTERLY REPORT OF THE BOSTON WOOL MARKET FOR  
JULY, AUGUST, SEPTEMBER, 1921, AND SEPTEMBER, 1920.

DOMESTIC WOOLS. (F. NATHANIEL PERKINS.)

	1921.			1920.
	July.	August.	September.	September.
OHIO, PENNSYLVANIA, AND WEST VIRGINIA.				
(UNWASHED.)	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
1/2 Fine Clothing . . . . .	27	28	28	54
1/2 Blood, Staple . . . . .	30	29	30	55
1/2 " " . . . . .	26	27	27	43
1/2 " " . . . . .	23	24	24	40
1/2 Fine Delaine . . . . .	36	34	33	65
MICHIGAN, WISCONSIN, NEW YORK, ETC.				
(UNWASHED.)				
1/2 Fine Clothing . . . . .	24	25	25	43 @ 50
1/2 Blood, Staple . . . . .	30	30	31	48 @ 55
1/2 " " . . . . .	24	25	25	38 @ 45
1/2 " " . . . . .	23	23	24	35 @ 40
1/2 Fine Delaine . . . . .	29	30	31	50 @ 60
KENTUCKY AND INDIANA.				
(UNWASHED.)				
1/2 Blood . . . . .	27	27	28	40
1/2 " . . . . .	25	25	26	37
1/2 Braid . . . . .	17	17	18	18
MISSOURI, IOWA, AND ILLINOIS.				
(UNWASHED.)				
1/2 Blood . . . . .	22	23	24	38
1/2 " . . . . .	21	22	22	35
1/2 Braid . . . . .	14	14	14	18
TEXAS.				
(SCOURED BASIS.)				
12 months, fine and fine medium . .	69	71	75	115
Spring, fine and fine medium . . .	59	60	60	95
Fall, fine and fine medium . . . .	50	52	52	80
CALIFORNIA.				
(SCOURED BASIS.)				
12 months, fine . . . . .	65	66	68	115
Spring, fine . . . . .	55	55	56	85
Fall, fine . . . . .	45	45	46	70
TERRITORY WOOL: Montana, Wyoming, Utah, Idaho, Oregon, etc.				
(SCOURED BASIS.)				
Staple, fine and fine medium . . .	75	78	80	130
Clothing, fine and fine medium . .	62	62	65	120
1/2 Blood . . . . .	67	67	68	120
1/2 " . . . . .	50	50	52	80
1/2 " . . . . .	40	41	42	55
NEW MEXICO.				
(SCOURED BASIS.)				
No. 1 . . . . .	65	65	70	130
No. 2 . . . . .	50	50	55	70
No. 3 . . . . .	35	35	38	40
GEORGIA AND SOUTHERN.				
Unwashed . . . . .	19	20	20	42 @ 35

DOMESTIC WOOLS.

The third quarter of the current year opened with trade at the seaboard markets somewhat spotty although there was a fair movement of wool supplies going forward to the mills. Values throughout the market held fairly firm. The introduction in the House by the Ways and Means Committee of the proposed tariff was an event of interest to the wool trade and textile industry, but the effect of the bill had been discounted so that it had little or no effect on the market.

The movement of wools in the West at this period was active and steady in the Territory sections, but in the Fleece states it was intermittent and somewhat retarded by the action of local "Pools." In Texas the wools moved with greater relative activity than in most sections as the clip in Texas this year was in exceptionally good condition, which may be accounted for by the fact that they have introduced sheep from other sections of the country which has had the effect of building up their flocks to a higher degree of fineness and length

As the quarter under review advanced, a greater strength developed in fine wool, while medium and low wools were somewhat easier. In midsummer a strong speculative buying, especially among dealers, developed, and before it subsided fine wools of all classes, especially fine scoured Australian and fine scoured Cape, established material advances.

September closed with wools moving steadily at firmer prices, with a tendency on the part of buyers to operate more freely in medium wools.

F. NATHANIEL PERKINS.

Boston, October 1, 1921.

PULLED WOOLS. (W. A. BLANCHARD.)

	1921.			1920.
	July.	August.	September.	September.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Extra, and Fine A . . . . .	70 @ 75	70 @ 80	75 @ 85	130 @ 140
A Super . . . . .	55 @ 65	60 @ 65	60 @ 65	85 @ 95
B Super . . . . .	40 @ 50	40 @ 50	45 @ 50	60 @ 65
C Super . . . . .	25 @ 30	25 @ 30	30 @ 35	40 @ 50
Fine Combing . . . . .	60 @ 65	60 @ 65	60 @ 65	100 @ 110
Medium Combing . . . . .	45 @ 50	45 @ 50	45 @ 50	75 @ 85
Low Combing . . . . .	35 @ 40	35 @ 40	35 @ 40	50 @ 60

PULLED WOOLS.

The quarter opened with a moderate demand for current pullings, which mainly consisted of B and C Lambs, and these wools accumulated through the month of July. About the middle of August a purchase of New York B Lambs amounting to four thousand bags was made by a Boston dealer on

a scoured basis of 40 cents. This transaction was followed later by a general demand for B and also C grades. Old wools carried over from the previous year have been gradually distributed and only a small amount now remains in pullers' hands. Fine wools — although limited in supply, were inactive until later in the quarter, when they were taken up at advanced prices. While the packers and the Eastern pullers report that they are closely sold up, the smaller Western pullers have not sold as freely. Wool pelts steadily increased in price as the quarter progressed.

W. A. BLANCHARD.

Boston, Mass., October 1, 1921.

FOREIGN WOOLS. (MAUGER & AVERY.)

*Scoured Basis, 1921.*

	1921.			1920.
	July.	August.	September.	September.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Australian Combing:				
Choice . . . . .	100	100	100	160
Good . . . . .	85	90	95	150
Average . . . . .	75	75	80	125
Australian Clothing:				
Choice . . . . .	100	100	100	160
Good . . . . .	80	80	80	140
Average . . . . .	70	70	75	115
Sydney and Queensland:				
Good Clothing . . . . .	80	80	80	140
Good Combing . . . . .	85	90	95	150
Australian Crossbred:				
Choice . . . . .	35 @ 65	35 @ 65	35 @ 65	50 @ 90
Average . . . . .	30 @ 55	30 @ 55	30 @ 55	40 @ 75
Australian Lambs:				
Choice . . . . .	85	85	85	140
Good . . . . .	75	75	75	125
Good Defective . . . . .	55	60	60	95
Cape of Good Hope:				
Choice . . . . .	100	100	100	130
Average . . . . .	70	80	85	100
Montevideo:				
Choice . . . . .	70	75	75	130
Average . . . . .	60	60	60	110
Crossbred, Choice . . . . .	50	55	55	90
English Wools:				
Sussex Fleece . . . . .				125
Shropshire Hogs . . . . .				110
Yorkshire Hogs . . . . .				55
Irish Selected Fleece . . . . .				58
Carpet Wools:				
Scotch Highland, White . . . . .	17	18	18 @ 19	
East India, 1st White Joria . . . . .	33 @ 34	33 @ 35	33 @ 36	45
East India, White Kandahar . . . . .	28 @ 30	28 @ 30	28 @ 30	35
Donskoi, Washed, White . . . . .				
Aleppo, White . . . . .	28 @ 30	28 @ 30	30	32 @ 35
China Ball, White . . . . .	35	35	35	65 @ 70
" " No. 1, Open . . . . .	24 @ 25	24 @ 25	24 @ 25	35 @ 38
" " No. 2, Open . . . . .	17	17	17	28 @ 32



FOREIGN WOOLS.

During the period under review, there has been a steady demand for fine Australian and Cape wools, of good staple, and the supplies in the market have been very much depleted.

There has also been an improved interest in good clear wools of  $\frac{3}{8}$  and  $\frac{1}{4}$  blood quality, suitable for the manufacture of knitting yarns, but the demand for these descriptions for worsteds has fallen off considerably.

There is some inquiry for certain descriptions of English wools, which are in limited supply on this side.

Scotch wools have been imported, largely by carpet manufacturers, on account of their low value, and the American demand has no doubt been the cause of increasing the cost at the close of September.

The demand for fine wools has depleted the stocks of fine tops, which had been imported during the spring in anticipation of the Emergency Tariff law.

MAUGER & AVERY.

Boston, Mass., October 1, 1921.

## IMPORTS OF WOOL AND MANUFACTURES OF WOOL.

Entered for Consumption, Calendar Years ended December 31, 1919 and 1920. Quantities, Values, Rates of Duty, and Accruing Duties.

Compiled and prepared from Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce.

ARTICLES.	Rates of duty.	Calendar Year ended December 31, 1919.					Calendar Year ended December 31, 1920.				
		Quantities.	Values.	Duties.	Value per unit.	Ad valorem.	Quantities.	Values.	Duties.	Value per unit.	Ad valorem.
Wool of the sheep, hair of the camel, and other like animals, n.s.p.f., and manufactures of:											
Unmanufactured —											
Class 1 — Merino, mestizo, melz, or metis wools, or other wools of merino blood, immediate or remote, Down clothing wools, etc., and all wools not hereinafter included in classes two and three —											
Wool —											
Unwashed (pounds) . . . . .	Free . . .	303,179,564	Dollars. 147,835,087	Dollars. . . . .	Dollars. . . . .	Pr. ct. . . . .	195,032,841	Dollars. 94,724,850	Dollars. . . . .	Pr. ct. . . . .	
Washed (pounds) . . . . .	Free . . .	8,013,764	5,231,914	. . . . .	.654	. . . . .	4,012,216	2,651,882	. . . . .	.661	
Scoured (pounds) . . . . .	Free . . .	23,330,182	18,340,750	. . . . .	.787	. . . . .	13,408,091	11,080,716	. . . . .	.871	
Total, Class 1 (pounds) . . . . .	Free . . .	334,523,510	171,407,751	. . . . .	.513	. . . . .	212,453,148	109,057,448	. . . . .	.514	
Class 2 — Leicester, Cotswold, Lincolnshire, Down combing wools, Canada long wools, or other like combing wools of English blood, and usually known by the terms herein used, and also hair of the camel and other like animals —											
Wool —											
Washed and unwashed (pounds) . . . . .	Free . . .	7,150,206	4,237,468	. . . . .	.600	. . . . .	4,041,614	1,978,685	. . . . .	.488	
Scoured (pounds) . . . . .	Free . . .	27,139	14,898	. . . . .	.548	. . . . .	135,988	161,611	. . . . .	1.189	
Camel's hair —											
Washed and unwashed (pounds) . . . . .	Free . . .	330,036	230,016	. . . . .	.698	. . . . .	2,465,737	1,694,324	. . . . .	.637	
Scoured (pounds) . . . . .	Free . . .			. . . . .					. . . . .		
Hair of the Angora goat, alpaca, and other like animals —											
On the skin (pounds) . . . . .	15 per cent,	243,518	60,382	9,057.30	.248	15.00	135,853	57,457	8,618.55	.423	
										15.00	

Not on the skin (pounds) . . . . .	15 per cent,	5,879,605	3,410,904	511,635.60	.530	15.00	4,299,858	2,285,263	342,789.45	.531	15.00
Total (pounds) . . . . .	Free . . .	7,707,381	4,592,382	. . . . .	.588	. . . . .	6,643,339	3,834,620	. . . . .	.577	. . . . .
Total (pounds) . . . . .	Dutiable . .	6,123,123	3,471,286	520,692.90	.567	15.00	4,435,711	2,342,720	351,408.00	.528	15.00
Total, Class 2 (pounds) . . . . .	Free and {	13,830,504	8,003,668	520,692.90	.578	. . . . .	11,079,050	6,177,340	351,408.00	.557	. . . . .
Class 3.—Donskoi, native South American, Cordova, Valparaiso, native Smyrna, Russian camel's hair, and all such wools of like character as have been heretofore usually imported into the United States from Turkey, Greece, Syria, and elsewhere—	Free and {										
Wool—	Free . . .	94,578,612	35,538,177	. . . . .	.376	. . . . .	35,087,074	11,085,469	. . . . .	.315	. . . . .
Washed and unwashed (pounds) . . . . .	Free . . .	1,153,858	708,646	. . . . .	.615	. . . . .	462,226	265,793	. . . . .	.574	. . . . .
Camel's hair, Russian—	Free . . .	765,455	521,405	. . . . .	.681	. . . . .	203,172	122,919	. . . . .	.605	. . . . .
Washed and unwashed (pounds) . . . . .	Free . . .	25,447	10,944	. . . . .	.430	. . . . .	56,271	33,680	. . . . .	.598	. . . . .
Scoured (pounds) . . . . .	Free . . .	96,523,372	36,779,172	. . . . .	.381	. . . . .	35,808,743	11,507,861	. . . . .	.321	. . . . .
Total, Class 3 (pounds) . . . . .	{ Free . . .	438,754,263	212,719,305	. . . . .	.484	. . . . .	254,905,230	124,399,929	. . . . .	.487	. . . . .
Total wool, etc., unmanufactured (pounds) .	/ Dutiable	6,123,123	3,471,286	520,692.90	.567	15.00	4,435,711	2,342,720	351,408.00	.527	. . . . .
Total wool, etc., unmanufactured (pounds) }	Free and {	444,877,386	216,190,591	520,692.90	.485	. . . . .	259,340,941	126,742,649	351,408.00	.488	. . . . .
Manufactures composed wholly or in part of wool, worsted, the hair of the camel, or other like animals—											
Wool and hair advanced in any manner; or by any process of manufacture, beyond the washed or scoured condition, n.s.p.f. (pounds) . . . . .	8 per cent,	700	907	72.56	1.295	8.00	70,118	101,520	8,121.00	1.447	8.00
Roving or roping (pounds) . . . . .	8 per cent,	224	349	27.92	1.558	8.00	18	24	1.92	1.333	8.00
Tops—											
Combed wool or tops, made, etc., of wool or camel's hair (pounds) . . . . .	8 per cent,	709,300	813,667	65,093.36	1.147	8.00	853,719	1,098,003	87,840.24	1.285	8.00
Made from hair of the Angora goat, alpaca, and other like animals (pounds) .	20 per cent,	22,655	33,752	6,750.40	1.490	20.00	139,077	148,729	29,745.80	1.069	20.00
Total tops (pounds) . . . . .	. . . . .	731,955	847,419	71,843.76	1.158	. . . . .	992,796	1,246,732	117,586.04	1.256	. . . . .

Imports of Wool and Manufactures of Wool, entered for Consumption, Calendar Years ended December 31, 1919 and 1920. Quantities, Values, Rates of Duty, and Accruing Duties. — Continued.

ARTICLES.	Rates of duty.	Calendar Year ended December 31, 1919.					Calendar Year ended December 31, 1920.				
		Quantities.	Values.	Duties.	Value per unit.	Ad valorem.	Quantities.	Values.	Duties.	Value per unit.	Ad valorem.
Wool of the sheep, hair of the camel, and other like animals, n.s.p.f., and manufactures of— <i>Continued.</i>											
Manufactures composed wholly or in part of wool, worsted, etc.— <i>Continued.</i>											
Blankets composed wholly or in chief value of wool (pounds) . . . . .	25 per cent,	20,350	Dollars, 38,263	Dollars, 9,365.75	Dolls. 1.88	Pr. ct. 25.00	75,749	Dollars, 140,556	Dollars, 35,139.00	Dolls. 1.854	Pr. ct. 25.00
Brands, loom woven and ornamented in the process of weaving, or made by hand or on any loom, knitting, or lace machine, composed of wool (yards) .	60 per cent,		171	102.60	. . . .	60.00	12,558	2,109	1,255.40	.168	60.00
Carpets and carpeting, including mats, rugs for floors, screens, covers, hassocks, bed sides, art squares, and other portions of carpets and carpeting, n.s.p.f.— Axminster, moquette, Aubusson, and chenille carpets, and carpets and carpeting of like character (square yards) . . . . .	35 per cent,	55,898	290,497	101,673.95	5.19	35.00	223,535	993,077	347,576.95	4.252	35.00
Brussels carpets and carpeting of like character (square yards) . . . . .	25 per cent,	1,084	3,571	892.75	3.29	25.00	14,637	27,078	6,769.50	1.843	25.00
Carpets woven whole for rooms, and Oriental, Berlin, Aubusson, Axminster, and other similar rugs (square yards) . . . . .	50 per cent,	391,592	2,529,692	1,264,848.00	6.46	50.00	925,453	7,808,031	3,904,015.50	8.432	50.00
Druggists and bookbinders, printed, colored, or otherwise (square yards) . . . . .	20 per cent,	3,130	3,719	743.80	1.19	20.00	6,248	9,188	1,837.60	1.470	20.00
Felt carpeting (square yards) . . . . .	20 per cent,	1,062	1,547	309.40	1.46	20.00	11,184	17,717	3,543.40	1.584	20.00
Saxony, Wilton, and Tournay velvet carpets, and carpets and carpeting of like character (square yards) . . . . .	30 per cent,	11,447	60,270	18,081.00	5.27	30.00	169,303	600,208	180,062.40	3.544	30.00

Tapestry Brussels, printed on the warp or otherwise, and carpeting of like character (square yards)	20 per cent,	6,413	7,465	1,493.00	1.16	20.00	22,175	35,844	7,168.80	1.616	20.00
	20 per cent,	.....	.....	.....	.....	20.00	405	1,135	227.00	2.802	20.00
Treble ingrain, three-ply, and all chain Venetian carpets (square yards)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Velvet and tapestry velvet carpets, printed on the warp or otherwise, and carpeting of like character (square yards)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wool, Dutch, and two-ply ingrain carpets (square yards)	.....	.....	.....	.....	.....	30.00	16,509	55,682	16,704.60	3.374	30.00
Carpets and carpeting of wool, or wool and cotton, n.s.p.f. (square yards)	20 per cent,	10	15	3.00	1.50	20.00	1,922	7,367	1,473.40	3.832	20.00
.....	20 per cent,	3,590	10,780	2,156.00	3.00	20.00	49,478	110,356	22,071.20	2.229	20.00
Total carpets and carpeting, etc. (sq. yds.)	Dutiable .	474,226	2,907,556	1,390,198.90	6.13	47.80	1,450,899	9,665,683	4,491,430.35	6.666	.....
<b>Cloths —</b>											
Wholly or in chief value of wool —											
Worsteda —											
Fancy woven (pounds)	{ 35 per	243,425	888,667	311,033.45	3.65	{ 35.00	373,048	1,351,033	472,861.55	3.620	{ 35.00
.....	cent,	437,409	.....	.....	2.03	{ 35.00	639,436	.....	.....	2.048	{ 35.00
Plain (pounds)	{ 35 per	86,167	271,543	95,040.05	3.15	{ 35.00	184,129	633,158	221,605.30	3.438	{ 35.00
.....	cent,	156,127	.....	.....	1.74	{ 35.00	340,648	.....	.....	1.853	{ 35.00
Total worsteds (pounds)	{ 35 per	329,592	1,160,210	406,073.50	3.52	{ 35.00	557,177	1,984,191	694,466.85	3.561	{ 35.00
.....	cent,	593,536	.....	.....	1.95	{ 35.00	1,000,084	.....	.....	1.984	{ 35.00
<b>Woolens —</b>											
Fancy woven (pounds)	{ 35 per	1,071,434	2,573,215	900,625.25	2.40	{ 35.00	2,404,122	5,027,771	2,074,719.85	2.465	{ 35.00
.....	cent,	1,567,825	.....	.....	1.64	{ 35.00	3,634,829	.....	.....	1.630	{ 35.00
Plain (pounds)	{ 35 per	671,089	1,750,809	612,783.15	2.61	{ 35.00	1,879,052	4,783,027	1,674,059.45	2.545	{ 35.00
.....	cent,	917,898	.....	.....	1.91	{ 35.00	2,909,976	.....	.....	1.643	{ 35.00
Total woolens (pounds)	{ 35 per	1,742,523	4,324,024	1,513,408.40	2.48	{ 35.00	4,283,174	10,710,798	3,748,779.30	2.499	{ 35.00
.....	cent,	2,486,723	.....	.....	1.74	{ 35.00	6,544,805	.....	.....	1.636	{ 35.00
Total worsteds and woolens (pounds)	{ 35 per	2,072,115	5,484,234	1,919,431.90	2.65	{ 35.00	4,840,351	12,694,989	4,443,246.15	2.621	{ 35.00
.....	cent,	3,075,259	.....	.....	1.78	{ 35.00	7,544,889	.....	.....	1.681	{ 35.00
Made from the hair of the Angora goat, alpaca, and other like animals (pounds)	40 per cent,	152,835	388,751	154,300.40	2.53	40.00	412,203	1,070,512	428,324.80	2.595	40.00
Made in chief value of cattle hair or horse hair, n.s.p.f. (pounds)	25 per cent,	433	231	57.75	.53	25.00	72,351	13,612	3,403.00	.188	25.00
Total cloths (pounds)	Dutiable .	2,223,383	5,870,216	2,073,840.05	2.64	35.30	5,324,905	13,779,413	4,874,973.95	2.586	.....



*Imports of Wool and Manufactures of Wool, entered for Consumption, Calendar Years ended December 31, 1919 and 1920. Quantities, Values, Rates of Duty, and Accruing Duties. — Continued.*

ARTICLES.	Rates of duty.	Calendar Year ended December 31, 1919.					Calendar Year ended December 31, 1920.				
		Quantities.	Values.	Duties.	Value per unit.	Ad valorem equivalent.	Quantities.	Values.	Duties.	Value per unit.	Ad valorem equivalent.
Wool of the sheep, hair of the camel, and other like animals, n.s.p.f., and manufactures of — <i>Continued.</i>											
Manufactures composed wholly or in part of wool, worsted, etc. — <i>Continued.</i>											
Dress goods, women's and children's, coat linings, Italian cloths, bunting, and goods of similar description, composed wholly or in chief value of wool —											
Bunting (pounds) . . . . .	{ 35 per cent,	4,725 {	11,968 {	Dollars. 4,188.80 {	Dolla. 2.53 {	Pr. ct. 35.00 {	1,224 {	4,399 {	Dollars. 1,539.65 {	Dolla. 3.593 {	Pr. ct. 35.00 {
(square yards) . . . . .	cent,	18,000 {			.66 {		2,662 {			1.652 {	
Coat linings and Italian cloths (pounds) . . . . .	{ 35 per cent,	113,362 {	242,483 {	84,869.05 {	2.14 {	35.00 {	317,926 {	738,459 {	258,460.65 {	2.322 {	35.00 {
(square yards) . . . . .		530,744 {			.46 {		1,390,080 {			.531 {	
Other dress goods —											
Cotton warp (pounds) . . . . .	{ 35 per cent,	99,137 {	238,518 {	83,481.30 {	2.41 {	35.00 {	122,142 {	277,715 {	97,200.25 {	2.274 {	35.00 {
(square yards) . . . . .	cent,	334,987 {			.71 {		439,094 {			.632 {	
All other (pounds) . . . . .	{ 35 per cent,	117,508 {	410,999 {	143,849.65 {	3.50 {	35.00 {	996,804 {	2,891,299 {	1,011,954.65 {	2.899 {	35.00 {
(square yards) . . . . .		349,022 {			1.18 {		2,807,317 {			1.029 {	
Total dress goods, women's and children's, etc. (pounds) . . . . .	{ 35 per cent,	334,732 {	903,998 {	316,388.80 {	2.70 {	35.00 {	1,438,096 {	3,911,872 {	1,369,155.20 {	2.719 {	35.00 {
(square yards) . . . . .		1,232,753 {			.73 {		4,639,213 {			.842 {	
Felts not woven (pounds) . . . . .	35 per cent,	10,965 {	27,664 {	9,682.40 {	2.52 {	35.00 {	122,808 {	64,483 {	22,569.05 {	.525 {	35.00 {



Imports of Wool and Manufactures of Wool, entered for Consumption, Calendar Years ended December 31, 1919 and 1920. Quantities, Values, Rates of Duty, and Accruing Duties.—Continued.

ARTICLES.	Rates of duty.	Calendar Year ended December 31, 1919.					Calendar Year ended December 31, 1920.				
		Quantities.	Values.	Duties.	Value per unit of quantity.	Ad valorem equivalent.	Quantities.	Values.	Duties.	Value per unit of quantity.	Ad valorem equivalent.
Wool of the sheep, hair of the camel, and other like animals, n.a.p.f., and manufactures of— <i>Continued.</i>											
Manufactures composed wholly or in part of wool, worsted, etc.— <i>Continued.</i>											
Press cloth of camel's hair—											
Expressly for oil-milling purposes, and so marked, cut into lengths not exceeding 72 inches, and woven in widths from 10 to 15 inches, and weighing not less than $\frac{1}{2}$ pound per square foot (pounds) . . . . .	Free . . . . .	22,673	29,823		1.31	10.00	15,608	18,408		1.179	10.00
Other n.a.p.f. (pounds) . . . . .	10 per cent.										
Total press cloth . . . . .		22,673	29,823		1.31		15,608	18,408		1.179	
Rags, mungo, flecks, nolls, shoddy, and waste—											
Mungo (pounds) . . . . .	Free . . . . .	166,732	81,867		.491		21,861	5,747		.262	
Nolls, carbonized, and other (lbs.) . . . . .	Free . . . . .	2,317,528	3,293,095		1.422		2,584,152	2,796,602		1.081	
Rags and flecks (pounds) . . . . .	Free . . . . .	1,316,541	265,888		.202		2,429,341	403,113		.165	
Shoddies (pounds) . . . . .	Free . . . . .	8,133	2,609		.321		24,603	12,265		.498	
Wastes—											
Slubbing, ring, and garnetted (lbs.) . . . . .	Free . . . . .	9,291	10,938		1.178		19,990	22,649		1.132	
Top, roving, and card (pounds) . . . . .	Free . . . . .	28,227	55,878		1.980		21,676	32,401		1.494	
Yarn, thread, bur, and all other wastes, carbonized wool, and wool extract (pounds) . . . . .	Free . . . . .	475,137	246,300		.518		1,871,026	973,800		.520	
Total rags, mungo, flecks, nolls, shoddy, and wastes (pounds) . . . . .	Free . . . . .	4,321,589	3,956,575		.918		6,972,679	4,246,577		.608	





Ditto (from Philippine Islands), (pounds) . . . . .	Free . . . . .	97,747	39,098.80	40.00	200,232	80,092.80	15
Of the hair of the Angora goat, al- paca, and other like animals . . . . .	40 per cent.						
Total manufactures, etc., of wool, etc. . . . .	Free . . . . .	3,986,398			4,265,000		
Total manufactures, etc., of wool, etc. . . . .	Dutiable . . . . .	14,544,052	5,179,499.47		47,168,591	16,354,785.24	
Total manufactures, etc., of wool, etc. . . . .	Free and Dutiable . . . . .	18,530,450	5,179,499.47		51,433,591	16,354,785.24	
Total wool of the sheep, hair of the camel, etc., and manufactures of . . . . .	Free . . . . .	216,705,703			128,664,929		
Total wool of the sheep, hair of the camel, etc., and manufactures of . . . . .	Dutiable . . . . .	18,015,338	5,700,192.37		49,511,311	16,706,193.24	
Total wool of the sheep, hair of the camel, { etc., and manufactures of . . . . .	Free and Dutiable . . . . .	234,721,041	5,700,192.37		178,176,240	16,706,193.24	



STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS  
OF AUGUST 24, 1912.

Of Bulletin of the National Association of Wool Manufacturers, published quarterly, at Boston, Massachusetts, for October, 1921.

STATE OF MASSACHUSETTS }  
COUNTY OF SUFFOLK } ss.

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Paul T. Cherington, who, having been duly sworn according to law, deposes and says that he is the Editor of the Bulletin of the National Association of Wool Manufacturers, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

*Publisher*, National Association of Wool Manufacturers, 50 State Street, Boston, Mass.

*Editor*, PAUL T. CHERINGTON, Secretary National Association of Wool Manufacturers.

*Managing Editor*, none.

*Business Managers*, none.

2. That the owners are (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock):

The National Association of Wool Manufacturers, a voluntary association without capital stock, three principal officers being: *President*, John P. Wood, Philadelphia, Pa.; *Vice-Presidents*, William M. Wood, Boston, Mass.; George H. Hodgson, Cleveland, O.; Franklin W. Hobbs, Boston, Mass.; *Secretary and Treasurer*, Paul T. Cherington, Boston, Mass.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are (If there are none, so state):

There are no stockholders or bondholders, mortgagees or other security holders.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is \_\_\_\_\_  
(This information is required from daily publications only.)

PAUL T. CHERINGTON.

Sworn to and subscribed before me this 21st day of September, 1921.

(SEAL)

WILLIAM R. BURKE.

(My commission expires January 16, 1925.)

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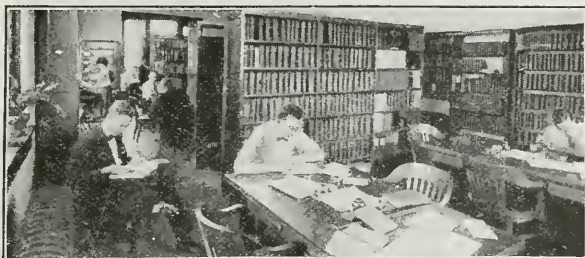
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